SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

SCIENTIFIC AND STATISTICAL COMMITTEE

Webinar

May 28, 2025

Transcript

Scientific and Statistical Committee

Dr. Marcel Reichert, Chair
Dr. Walter Bubley, Vice Chair
Dr. Jeffrey Buckel
Dustin Addis
Dr. Frederick Scharf
Dr. Jie Cao
Dr. Kai Lorenzen
Anne Markwith
Dr. Steve Turner
Dr. Chris Dumas
Dr. Jared Flowers
Dr. Fred Serchuk
Dr. James Gartland
Dr. Alexei Sharov
Dr. Jennifer Sweeney-Tookes
Dr. Christina Package-Ward
Dr. Amy Schueller
Dr. Jason Walsh

Council Members

Trish Murphey, Chair
Dr. Carolyn Belcher
Tim Griner
Kerry Marhefka
Jimmy Hull, Jr.
Amy Dukes

Council Staff

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Myra Brouwer
John Hadley
John Carmichael
Kathleen Howington
Dr. Chip Collier
Emily Ott
Dr. Julie Neer
Dr. Mike Schmidtke
Nick Smillie
Christina Wiegand
Meg Withers

Attendees and Invited Participants

Rick DeVictor
Shep Grimes
Nikhil Mehta
Dr. Erik Williams

Observers and Participants

Other observers and participants attached.

The Scientific and Statistical Committee of the South Atlantic Fishery Management Council convened via webinar on May 28, 2025, and was called to order by Dr. Marcel Reichert.

INTRODUCTIONS, APPROVAL OF AGENDA, APPROVAL OF MINUTES FROM APRIL 2025 MEETING, APPROVAL OF FINAL REPORT FROM APRIL 2025 MEETING

DR. REICHERT: Good morning, everyone. Welcome to the May 28th webinar of the South Atlantic Scientific and Statistical committee. I'm Marcel Reichert, current chair of the SSC, and so, Judd, let's start with the introductions, and you had that list up, and I recommend just going from top to bottom and let people introduce themselves for the transcripts.

DR. CURTIS: That sounds good, Chair, and let me get that back up.

DR. REICHERT: No worries.

DR. CURTIS: Okay. For roll call, for the record, we'll start with Marcel Reichert.

DR. REICHERT: Marcel Reichert, SSC chair.

DR. CURTIS: Wally Bubley.

DR. BUBLEY: Wally Bubley, South Carolina Department of Natural Resources, SSC vice chair.

DR. CURTIS: Dustin Addis.

MR. ADDIS: Dustin Addis, Florida FWC, stock assessment.

DR. CURTIS: Jeff Buckel

DR. BUCKEL: Jeff Buckel, North Carolina State University.

DR. CURTIS: Jie Cao.

DR. CAO: Jie Cao, NC State University.

DR. CURTIS: Chris Dumas.

DR. DUMAS: Chris Dumas, University of North Carolina at Wilmington.

DR. CURTIS: Jared Flowers.

DR. FLOWERS: Jared Flowers, Georgia DNR, Coastal Resources Division.

DR. CURTIS: Jim Gartland.

MR. GARTLAND: Jim Gartland, Virginia Institute of Marine Science.

DR. CURTIS: Kai Lorenzen.

DR. LORENZEN: Kai Lorenzen, University of Florida.

DR. CURTIS: I don't see Anne, and so I'll skip her for now. Genny Nesslage.

DR. NESSLAGE: Genny Nesslage, University of Maryland, Center for Environmental Science.

DR. CURTIS: Christina Package-Ward.

MS. PACKAGE-WARD: Christina Package-Ward, NOAA Fisheries, Southeast Regional Office.

DR. CURTIS: Fred Scharf. You're unmuted, Fred, if you would like to test your audio and check-in. We still can't hear you, Fred. Your microphone is coming on, but we're not hearing any audio coming through, and so we'll check back with you in a minute. Fred Serchuk.

DR. SERCHUK: Fred Serchuk, SSC.

DR. CURTIS: Alexei I don't see online. Alexei Sharov, are you here? Jennifer Sweeny-Tookes. I've got you unmuted.

DR. SWEENEY-TOOKES: Jennifer Sweeney-Tookes, Georgia Southern University, and chair of the SEP.

DR. CURTIS: Thank you. Steve Turner.

DR. TURNER: Steve Turner, SSC member.

DR. CURTIS: Jason Walsh.

MR. WALSH: Jason Walsh, North Caroliana Division of Marine Fisheries and SEP vice chair.

DR. CURTIS: Carolyn Belcher.

DR. BELCHER: Carolyn Belcher, council liaison and representative for Georgia DNR Coastal Resources.

DR. CURTIS: Erik Williams, and I don't see Erik online. Science Center folks, do you know if Erik is going to be joining us this morning, or today?

SSC MEMBER: I think he'll be here a bit later.

DR. CURTIS: Okay. Thank you. Shepherd Grimes.

MR. GRIMES: Shepherd Grimes, NOAA Office of General Counsel, Southeast Section.

DR. CURTIS: Okay. Let's go back and try Fred Scharf again, and let's see if we've got audio coming through. Fred, I still don't hear your audio, even though the microphone is green. You might need to log out and try to reboot back in, if you can hear me. It looks like he did. Okay. Okay, Mr. Chair, and I think that is all present and accounted for at the moment.

DR. REICHERT: Thank you, Judd, and we'll check back with Fred in a little bit. Next up is the review and approval of the agenda. Any additions or questions about the agenda? Please raise your hand, or, if you disagree with approval of the agenda, please raise your hand. Judd, any hands raised?

DR. CURTIS: No hands raised.

DR. REICHERT: Okay. The agenda is approved, and this is something we have not traditionally done, but we've talked a little bit about approval -- Sorry. No, and approval of the minutes we have done, and sorry about that. I'm getting ahead of myself. Any comments or editorial corrections to the minutes that were provided, the minutes from the April meeting?

MR. GRIMES: I just note that I emailed some comments and corrections to Judd. Thanks.

DR. REICHERT: Thanks. Thanks, Shep. As always, we appreciate your vigilance there, and we'll make sure that those corrections are going to be reflected in the final minutes. Anyone else? No hands raised?

DR. CURTIS: No hands raised. Sorry. We've got Jennifer Sweeney-Tookes. That might have been a vestigial hand there, Chair.

DR. REICHERT: Okay. Then the meeting minutes were approved with minor editorial corrections, and then this is what I was going to get at earlier. We traditionally have not approved SSC reports. We discussed that it would be good to at least have a formal approval of our reports. Usually, they are just included in the next meeting, and so I want to ask if there are any comments, or anyone disagreeing, with approval of the minutes of the final SSC report.

I want to bring your attention in particular to the pages 17 and 18. When I sent out the last draft of the report, I highlighted those, and I just want to make sure that that reflects the SSC consensus. There were some -- I tried to consolidate all the comments, but I just wanted to make sure that those comments were correctly reflected in the report, and so I will give you a moment to look up those pages, 17 and 18, and, if I don't hear from anyone, I assume that the SSC agrees with approving the report, the April SSC report. Any hands raised, Judd?

DR. CURTIS: No hands raised.

DR. REICHERT: Then the April SSC meeting report was approved by the SSC. Next up is public comment. Correct me if I'm wrong, Judd, and we have received a written comment by Dewey Hemilright. Any other written comments, and are there any members of the public who would like to make a public comment at this point?

DR. CURTIS: Marcel, we received the one written comment from Captain Dewey Hemilright. No other written comments have been submitted as of yet, but we can open the floor for verbal public comment at this time.

DR. REICHERT: Okay.

DR. CURTIS: Any members of the public that wish to voice public comments, you may do so now, or you may do so during each of the agenda items.

DR. REICHERT: Any hands raised, Judd?

DR. CURTIS: Yes, and I've got Dewey. Dewey, you're unmuted, and feel free to give your public comment.

PUBLIC COMMENT

MR. HEMILRIGHT: I thought I sent two public comments in, in two different emails, and I just wanted to follow-up on that, to make sure that everybody received two different emails. They might have been a day apart, but I sent two emails on comments, basically kind of for two different things, and I'll be commenting during the comment section for under Number 3 and Number 4. Thank you.

DR. REICHERT: Thanks, Dewey. We appreciate that, as always.

DR. CURTIS: Dewey, and this is Judd. Did you email me that second one?

MR. HEMILRIGHT: Yes, I did.

DR. CURTIS: Okay. I'll look through my inbox and distribute it to the SSC. I think I only sent out the first one that you sent. I apologize, but we'll get that out. No other hands raised, Chair.

DR. REICHERT: Okay, thank you. Then let's move on to Agenda Item 3, SEDAR 92: Atlantic Blueline Tilefish Northern Region Model, and I wasn't sure, Judd, if you want to briefly introduce that, before we go to the presentations. I think Nikolai is going to present the overview, and then we have some other presentations amongst there, and Jim will provide the -- You may remember that we had a subgroup of combined Mid-Atlantic and South Atlantic SSC members that reviewed the northern part of this assessment, and Jim will provide an overview of that review, and so, Judd, I'll hand it over to you, and take it from there. Thanks.

SEDAR 92: ATLANTIC BLUELINE TILEFISH STOCK ASSESSMENT REVIEW -- NORTHERN REGION MODEL

DR. CURTIS: Thanks, Mr. Chair, and so there is several components to this section here, as you see, based on all the attachments. As Marcel mentioned, the SEDAR 92 Atlantic Blueline Tilefish Northern Region Model went through the subgroup review, which was comprised of members of the Mid-Atlantic and South Atlantic SSCs.

In addition, during that subgroup review, we received a presentation on the SADL survey, which the South Atlantic is quite familiar with. The Mid-Atlantic has also received -- They have two years of an ongoing SADL survey, and will be getting the third year completed this year, but they were briefed on the SADL survey. The reason for that is because the proportional estimation methodology that was also put together for the subgroup, and you will see here, was the SADL survey served as the backbone for that proportional estimation methodology.

After those presentations, Jim will provide a report on a presentation from the joint subgroup. You've got the presentation in your briefing book materials, as well as the final report from the subgroup, and, Mr. Chair, I'll leave it up to you if you would like to take Q&A after each of the presentations, maybe a short five-minute Q&A or so for each of those, before we get into the recommendations and our action items that the SSC needs to address today.

DR. REICHERT: Yes, and let's do that, a brief Q&A after each presentation. I think that's the best way to approach that, and then we can move on to the action items, and so thanks. That's a good idea.

DR. REICHERT: Okay, and just to set the stage, and looking a little bit ahead, so keep in mind this was the Northern Region DLM Model, which was from Cape Hatteras northward, up through the Mid-Atlantic, and part of this -- Part of the subgroup's task, as well as you all's, in addition with the Mid-Atlantic SSC, is to determine that proportional estimation methodology is scientifically sound, and then generate -- From that methodology, generate an ABC for the jurisdiction of the South Atlantic north of Cape Hatteras, which is just Cape Hatteras to the Virginia-North Carolina border.

We'll also then receive a presentation from Nikolai on the southern model, which is Cape Hatteras south, and then, combined, those two ABC recommendations will fill the ABC recommendation for the entire South Atlantic jurisdiction for blueline tilefish, and so that's kind of a roadmap of where we're going, to keep in the back of your minds.

DR. REICHERT: Judd, real quick, I failed to mention that I sent out the assignments yesterday, and sorry for the late message there, and so please take a look at that, in terms of providing some notes to us to help us write the report. I'm not going to mention all the names, but I just wanted to remind the SSC members that I sent that assignment list out yesterday. Thank you.

DR. CURTIS: Okay. Great. So, without further ado, Nikolai, I'll hand it off to you. Would you like presenter mode?

DR. KLIBANSKY: Okay. Yes, and that sounds good.

DR. TURNER: Judd, this is Steve, and do we have a copy of this presentation? Is this 3b, or is this the other one?

DR. CURTIS: This is 3b.

DR. TURNER: Okay. I have that. Thank you.

DR. REICHERT: Judd, was Fred able to join us again?

DR. CURTIS: Let's check. Fred Scharf, you're unmuted on our end, if you would like to test your audio.

DR. SCHARF: Judd, can you hear me?

DR. CURTIS: We've got you now, Fred. Thank you very much.

DR. SCHARF: Okay. Perfect. Thanks.

DR. REICHERT: Just for the record, Fred, can you do your usual introduction?

DR. SCHARF: Sure. Fred Scharf, UNC Wilmington.

DR. REICHERT: Thank you.

DR. KLIBANSKY: Judd, I think I'm waiting. I don't have it.

DR. CURTIS: I'm still trying. Here we go. This is weird.

DR. KLIBANSKY: Just so you know, I have a share icon, but it's grayed out.

DR. CURTIS: Yes, and they're not giving me an option to make you the presenter. I can mute you, and I can dismiss you, but I can't make you the presenter right now. All I can make is Mike the presenter.

DR. SCHMIDTKE: Nikolai, are you, I guess, signed on via a browser, or something like that, rather than like through GoToMeeting directly?

DR. KLIBANSKY: Yes, and I signed on through -- Do you want me to sign off and --

DR. SCHMIDTKE: Yes, and I see an indicator next to your name that says "web", and I think that that's restricting permissions for us to be able to do certain things.

DR. CURTIS: Mike, you're spot on, and that's exactly what's wrong, and so, yes, if you could log out and log back in under the GoToWebinar app, Nikolai, then I can make you the presenter.

DR. KLIBANSKY: Okay. All right. Well, bye for a moment.

DR. CURTIS: Okay. Apologies for the technical difficulties.

DR. REICHERT: No worries, Judd.

DR. TURNER: Judd, while we're waiting, do you want to describe how you want us to take notes through that Google Doc?

DR. REICHERT: Yes, and that may be a good idea. We did the same thing we did at the last meeting, and thanks for reminding us, and so there is, once again, a Google Doc. Judd, would you like to address that, real quick? I know you're --

DR. CURTIS: Thanks, Steve, and so I sent you all a link to the Google Notes Doc, and the primary function that I'll use that for is just taking notes during the presentations and the question-and-answer sessions. What I would like to do is bring the overview over to the broadcast screen, when we're making our recommendations, so that those are captured. It's little more difficult to do so on a webinar, transcribe all those things over, but SSC members should have access to commenting on the notes, so feel free to drop in your comments, and your notes, on the various topics. That will help us compile the report on the backend.

DR. REICHERT: Yes, and, in particular, key questions and recommendations. We, of course, have the transcripts, and so there's no need for detailed back-and-forth discussions, but our recommendations and key questions should be captured in there, and so thank you, and again, Steve, thanks for reminding us.

DR. CURTIS: While we're waiting for Nikolai, Anne, I see you've joined the webinar, if you would like to test your audio and check in with your name and affiliation for the record.

MS. MARKWITH: Hi, Judd, and can you hear me?

DR. CURTIS: Yes, and we've got you.

MS. MARKWITH: Okay. So Anne Markwith, NC DMF, Fisheries Management.

DR. REICHERT: Thanks, Anne, and welcome.

DR. CURTIS: Okay, and Nikolai is back. I've got two Nikolais now.

DR. KLIBANSKY: Can you hear me?

DR. CURTIS: Yes. We've got you, and now I can make you presenter. Perfect. All right. Thanks, Nikolai.

DR. KLIBANSKY: Okay. I intended to share my screen. Do you see a presentation?

DR. CURTIS: We've got the webinar, the GoToWebinar, tab.

DR. KLIBANSKY: Okay. Let's just go like this. It's probably the easiest thing.

DR. REICHERT: There we go.

DR. KLIBANSKY: You never know what screen it's going to pop up on.

DR. CURTIS: It likes to change it up on you every time as well.

DR. KLIBANSKY: Yes.

DR. REICHERT: Just to keep it interesting.

DR. KLIBANSKY: Yes, and it's got to keep it interesting.

DR. REICHERT: All right. Go ahead, Nikolai.

DR. KLIBANSKY: Okay, so I'm going to go full-screen mode, and so today is not May 13th, as it says on the slide, but this is a presentation that I gave to the Mid-Atlantic SSC on May 13th, and I just didn't change the date. Today, I believe, is May 28th, and this is actually the shorter version of the presentation that I've given on the northern DLM analysis.

I think, since last I presented to this SSC, I had also presented a longer version to the joint subcommittee of the Mid-Atlantic and South Atlantic SSCs, and so this will be I think twenty minutes or so, and, if we need more clarification on anything, I have more slides that we could look at, but, yes, and I'll get started.

Standard table of contents, and I'm going to go through an introduction, which will get into some background on the SEDAR 50 benchmark assessment, which laid the groundwork for a lot of what has been done here, and then talk about what changed for the SEDAR 92 operational assessment, and I'll go through methods, which will include a kind of review of the input data and the analyses that were run, and then look at results, discussion, and very brief conclusions.

For SEDAR 50, we were initially -- I know that some of this is review, and I'm just going to kind of go through it, and hopefully it won't, you know, be too painful, but just to remember, for SEDAR 50, we were initially expecting to do one model for the Atlantic, you know, that would go from the Florida Keys northward, but problems with the early models led the assessment panel to reconsider the spatial range of the landings data and the indices of abundance.

Basically the, you know, distribution of landings changed in later years, a lot more removals north of Hatteras, and the indices of abundance that we were using, which are fishery-dependent, didn't really reflect the trends in those landings, and so we, at that time, ended up, you know, saying, well, we are going to, you know, restrict the landings data to the area south of Hatteras, and so that was better for an assessment south of Hatteras, because then we had a, you know, age-aggregated surplus production model we could use that had landings and indices that matched, but the problem for the north was that we then had to do something different north of Hatteras.

That decision on what to do was really dependent on what data were available, and so just to, you know, reiterate the map that we're thinking of, this is a plot that I may have shown in a previous presentation to this group, and this is just a whole bunch of data we had aggregated from SEDAR 50, showing where blueline were caught, which are these dark-blue dots, and all the other locations where gear had been fished, that sometimes caught blueline, but, you know, the light-blue areas are places where blueline hadn't been caught, just to kind of get a sense of the distribution.

At any rate, in SEDAR 50, we split analysis, and I don't know if you can see my little hand on the screen, but, if you can't, I'm just mousing over the dotted line that extends from upward from Hatteras, showing where the split in the data is.

We had -- You know, by the time that we had -- By the time we had made the decision to actually do that split, we had already, at the data workshop for SEDAR 50, done what we could to try to like dig into any data sources that were available, because, you know, one issue with SEDAR 50, that we only realized sort of shortly before the assessment, was that the age data were not reliable, and so we had already started kind of getting a bunch of proxy information together for the assessment, that ended up being really handy when we started to do these data-limited methods.

We had to kind of go and say, all right, well, what data do we have available north of Hatteras, and do we have age data? No, we do not. We had length data, and so we had a few different sources, but determined that the best way to do it was to use one representative dataset, you know, for observing trends in size distribution, and so commercial longline were the lengths that we decided to use.

We did not have indices of abundance, as I mentioned a minute ago, that could tell us anything about trends and abundance north of Hatteras. We did have removals, and so that's an important piece of the inputs, and then we had a set of life history parameters. Some of those in SEDAR 50 were based on meta-analysis of related species, and, actually, in SEDAR 50, they were all based on meta-analysis, but, in the present analysis, you'll see that the growth models are now based on blueline tilefish, and maturity inputs already were for SEDAR 50, and still are.

The way that the DLM analysis works is we basically provide all these data inputs to the DLM input object, DLMtool input object, and DLMtool will then determine what approaches can be applied. I put, in the report that I wrote to support this afternoon's presentation, that it's important to emphasize that DLMtool will determine what can be applied, but it doesn't tell you what should be applied, and so it ends up really being up to -- It basically just, you know, has some code internally to say what inputs are needed, you know, to run this management procedure.

That's what it calls different analyses that it does. It calls them MPs, or management procedures, and so it figures out what can be applied, and I made a point in the report addendum to say that you really need a panel of experts to determine what MPs should be applied, and so, for this, that panel of experts was mostly, you know, folks from SEDAR 50 that determined what we ended up running for SEDAR 92, but so DLMtool determines what approaches can be run, and then it just runs them, but then you have to sort of ignore them, if you don't want to use them for catch advice, and so it just reports these distributions of TACs.

In some of the newer code, you can get some plots out of these management procedures, but, for the most part, it just reports these distributions of total allowable catch, and it's distributions, because it's, you know, resampling a lot of values, a lot of input values, in a kind of bootstrapping, or a Monte Carlo approach, and so you don't really get an individual base run, per se, and you take this distribution of TACs.

At any rate, you know, it runs everything it can, and then we determined -- The SEDAR 50 assessment and review panels determined which MPs we should focus on, and so those are documented in the SEDAR 50 report.

What happened to SEDAR 50 was then, you know, the South Atlantic, the Southeast Fisheries Science Center, and that's, you know, Noah and me, and we did that analysis, and then we actually

provided it to this joint subcommittee of the Mid-Atlantic and South Atlantic SSCs, and that subcommittee actually selected a further subset of MPs to use for management.

Now stepping into SEDAR 92, what we did was to use the most updated, up-to-date version of DLMtool software, which is an R package. It's very easy to just, you know, install and update it, and then we, you know, considered what MPs to use based on the MPs that the Mid-Atlantic and South Atlantic joint SSCs had run, and so we considered those to be, and this is putting the TORs, the approved models for the area of north of Hatteras. We were tasked with running the approved models, and so that was sort of important, because, depending on what models you use, that might depend -- You know, influence what data you are looking for and who you task with getting that data.

Based on selection of models, and, you know, this is going back over a year, thinking of what we would run, and we identified datasets that were needed by those approaches, and then, you know, at the center, we have to identify people who are going to be tasked with getting these different datasets.

Then a lot of the process for this assessment was -- A lot of the time was this landings topical working group, which I think I talked about last time I presented to you, you know, which was tasked with reviewing and recommending catch and landing streams for north of Hatteras. That took us, I think, through August or so, and then an additional topical working group was actually added later in the process.

The process was initially supposed to end in November of last year. There was interest in looking into age data that South Carolina DNR had, and so we convened this life history topical working group between August and December of last year, with a kind of a limited focus of looking at that South Carolina DNR age data to update growth model parameters, which would be able to go into these DLMtool methods, and so, you know, again, that was October through December.

The final data -- I sort of think of the final data input date as being in January. That was when I, you know, got the report about the growth model parameters and could know what to put into the analyses, and then this bullet is noting that, you know, I got everything together, and started running the analyses, and some of the approaches we're expecting to use, that were used for management in SEDAR 50 or, you know, after SEDAR 50 were failing, and so I just added back in MPs, other management procedures, that had been reported in SEDAR 50, you know, so that there would be additional methods that could be used to support -- To provide TAC advice, catch advice, if we couldn't sort out what was going on with those MPs. Just going through the timeline, the SEDAR 92 report was submitted in March, and then, you know, we had that joint meeting of the Mid and South Atlantic SSCs in April.

Now I'm going to go through the data sources here, and a bunch of this is going to be the same for what I'm going to present later today for the area south of Hatteras. Some of the inputs will be really unique to north of Hatteras, but some of them are not, and I go through them just kind of in the format of what the data structure is. To me, it's helpful to think of it that way, and maybe it will be for you too, and so the different pieces of information that go into the DLMtool input object are either matrices, vectors, or points.

The one data matrix that goes in here is a catch-at-length matrix, and so, at a number of points in this presentation, I have this true type font representation of the names of the DLMtool input objects, for anybody who, you know, uses DLMtool and kind of wants to map these inputs back to the input object, and so CAL is the name that DLMtool uses.

At any rate, it's just like, you know, a matrix of length composition information, and so it goes from 2006 to 2023. These are stacked bar plots, showing the data for the different years over that time period, and, above the bars, you can see the numbers of fish that were observed in each of those years, and so, in a bunch of years there are, you know, decent numbers, but the numbers of trips was pretty low since 2013. It was less than ten trips since 2013, and that's pointed out in a working paper by Micki Pawluk that's available on the SEDAR website.

I'll probably point this out later too, but just note that, while this matrix goes in, and, you know, you can see clearly that there's this time series, it's not really being used as a time series by any of the management procedures that are being run, and so just kind of keep that in mind. I'll kind of point out how it's being used.

In terms of vectors of information that go in, we have a time series of removals, in pounds, and it's catch vector that we put in. That vector is also used to calculate the CV of catches that's used by some of the MPs, and then simply the vector of years that are associated with the catch data, and so, in SEDAR 50, we, you know, had to consider what time series, what part of the removals to use, for these management procedures, and we determined that it was most appropriate to use sort of a later time period, when catches had increased in the north, and not include this earlier period when catches were developing, and so that's what's shown here.

The dark line is the series, part of the series, that's actually used in the input, and, again, this is input as a time series, but it's not -- There's no time series trend being estimated within the MPs that were run. It's used to compute average catch over different periods of time, and then, in the mean length methods, as I'll point out, just the actual last value of the catch time series is used. It's the most recent catch.

Then there's a bunch of life history information that goes in here, and so we have a natural mortality estimate that is the same as in SEDAR 50. This was based on a Tmax of forty, and using the Then et al. equation computed, you know, based on this forty, a Tmax of forty, it gives us an M of 0.17.

Then we got creative to determine, you know, what should be the CV associated with that M, and so we had this upper estimate of M that had been computed from a Tmax of twenty-six. That was a minimum Tmax of twenty-six, that was actually determined from blueline ages back in SEDAR 50, and then we basically determined what's the normal distribution that would have that value of 0.25 as its 97.5th percentile, and that came out with a CV of 0.24. Again, that's from SEDAR 50, and it’s kind of grandfathered in.

We had a length of maturity at 305 millimeters, and the CV associated with that. This is from SEDAR 5, and there were very few immature fish observed in the data, although it was based on blueline tilefish individuals.

Okay, and so then these are some important inputs for the mean length methods, and this is really what that length information is being used for, is to determine a couple of additional input values.

One is this modal length of catches. It's really the size at first selection, the size of fish in the first length mode, and so I computed that here, you know, by determining the value of this first length mode, to make the input called the LC, which is 533 millimeters. It also has this input of length at full selection, which it uses later in the same way, and so that's set to be equal to LC.

Then the other value that comes out of this, and this is a composite distribution of all those lengths, from all of the years of length data, and so we also compute this other value called Lbar, which is the mean length of the catch, and that's larger than LC, and so that Lbar is shown here as this dashed line.

We also have growth model parameters that go into this, as inputs, and so this is standard von Bertalanffy growth parameters of K, L infinity and T0, and then CVs determined from CVs associated with those, and those all came from, you know, results of that topical working group that we convened in the fall, looking at fitting growth models to the blueline tilefish data, age data, that South Carolina had developed, and Wally Bubley did most of the work on that, and fit a lot of different growth models, and this was the final one that we ended up using.

This is actually fit to both males and females, and it includes fish both from north and south of Cape Hatteras, and so these are the same values that are used in the southern model that I'll talk about later, and then, finally, some -- I think this is final, or not quite final, and there's a couple more after this, but parameters for the weight-length equation.

This is a standard power function. It's a pretty precise relationship from SEDAR 50, and then we have a steepness estimate, and that was based on a meta-analysis, because, of course, we don't have a lot of information on steepness for blueline tilefish, and then a CV associated with that, and then the Tmax, as I mentioned before, goes in as a separate input.

Then -- I guess I'm going a little longer than twenty minutes, but I think that will be okay. It will probably save us time later on, and so, getting into the methods that we applied, the first three methods are simple catch-based methods. One is just average catch over the entire catch time series. Another one is called CC1, and it's just the average catch over the most recent five years of the catch time series, and CC4 is that same value as CC1, but multiplying it by 0.7, and so 70 percent of the average catch.

Okay, and then there's these two mean length methods, which the first part of these mean length methods are identical, and so it uses a Beverton-Holt equilibrium mean length method to estimate the recent Z, and then ends up computing the current biomass, and then, in the second step, it uses life history data, as mentioned above, and solves the Euler-Lotka equation for intrinsic rate of increased R, and then it computes R over two to estimate an FMSY.

Then, in the final step of the calculation, it multiplies that FMSY by the B current to output a TAC, and so, as with any of these methods, it's resampling a lot of the inputs, and it’s going to give a distribution of those TACs, but part of what I think is worth pointing out is that, you know, these steps are independent, this first part where it's determining the B current and second where it's determining the FMSY. You know, there's inputs that influence both parts, but they are being, you know, conducted separately.

The other mean length method starts up the same way, and it uses that equilibrium mean length method to estimate recent Z, and then subsequently a current biomass, and then conducts a yield per recruit analysis to estimate a proxy for FMSY, instead of using that Euler-Lotka equation, but then, in the final step, again, it multiplies the FMSY by B current to give us the TAC estimates.

We run all those approaches, and look at the results, and these are the distributions of TAC, the TACs, and just, you know, a density smoother is applied, and this is over, you know, a decent range of, on the X-axis, in thousands of pounds, and so the three average catch methods are the red, orange, and green distributions, and then the purple and blue lines are the two mean length methods, which, you know, it's easy to just, you know, look at them and see that there's something amiss there. You know, when you look at the medians of those distributions, they're extremely high, and very uncertain.

These are the quantiles of those distributions, just kind of for reference. You can see that the median distributions of these two mean length methods were, you know, many times higher than any of the median distributions for those other average catch approaches, and they're, you know, something like thirteen to sixteen-times as high as the highest annual observed catch that we have seen in that area north of Hatteras.

I think I get, later in this presentation, about what was amiss with those management procedures, but suffice it to say I removed them from the analysis. You know, they just seem, you know, like they're producing very unreasonable values, and so that left these three average catch methods, which are shown here again, and then I just put the distribution combining all of those in gray here, just for reference.

This is the same table as I showed before, but just with these three method, and then quantiles for that gray distribution combining all of them. I'm not recommending any one of these, per se, but just providing all of those for reference.

You know, what happened with the mean length methods? They worked fine in SEDAR 50, and then they produced really strange results this time, and so I dug into the code for these management procedures, so that I could see what was going on inside, because they kind of work as a little bit of a black box. You know, they don't produce a lot of output, other than the TAC, and I realized that one thing that' was happening is in that-- I mentioned that first step in the mean length methods is to run this Beverton-Holt mean length equation, equilibrium mean length equation, and it's just this. It's the Z equals -- This is von Bertalanffy parameters K times L infinity minus the Lbar, which is that mean above the size at full selection, LC, and so it's over the Lbar minus LC.

When you plug in the values that -- When we plug in the values for -- Sort of the input values for this assessment, you end up with a Z of 0.11, and we have an M that's higher than that, and so we end up with recent F estimates that are negative.

The management procedures will actually filter out negative values, or runs with negative F recent values, but it filtered out so many, and then the remaining runs were -- They had very low F, you know, that would start near zero and go up to about 0.05, and so it causes the estimates of B current to be really widely varying, and they tend to be very, very large.

You know, I pointed out before, and I've tried to mention that those LC and Lbar values are important, and, you know, the way that I chose to estimate them was using the composite length information, because the methods are really, you know, supposed to be run on population equilibrium, which, you know, is also potentially a problem for those methods, because I think this population is not at equilibrium, but, at any rate, so I combined all the length data, and also the individual years of length data are not very rich, as I mentioned, and there's a few trips for most of those years, especially recently.

I kind of wanted to look into what would happen if you computed all those Z estimates from individual years of length information, and so I computed the LC and bar values for a lot of those individual years, and this is showing those Z estimates plotted over time, as the black line, and then the estimated M is there as the horizontal red line, and so, actually, in most years, you would end up with a lot, if not most, negative Fs.

I still wanted to know why did things work out in SEDAR 50, and it kind of seems to come down to -- Well, I'm going to flip back for a second. The last assessment ended in 2015, and so I truncated the data to end at 2015, to do kind of a sensitivity run, and, as you can see from this plot, Z in 2015 was pretty high, and so you don't end up with a negative F issue, and so this is a run where I just peeled back data to 2015, all of the data, the length data and the catch data, and, you know, this is what you would get if you peeled off all of that data, and so you can see that the mean length methods are lining up a lot better with the average catch methods, although they're still very uncertain. I just consider this as kind of a sensitivity run to try to understand why those methods worked last time and didn't work so well this time.

My conclusions, from all of that were that, were that, you know, the mean length methods which were used in SEDAR 50 did not provide reasonable results in SEDAR 92, and, of course, the remaining MPs were solely catch-based, and they produced pretty expected results, based on just how simple they are, but, as far as, you know, providing catch advice, the medians of those ranged from 443,000 to 646,000 pounds, with an overall median of 495,000 pounds, and so I'll leave you with this peaceful image of Duke Gardens in Durham, North Carolina and take any questions.

DR. REICHERT: Thanks Nikolai. We appreciate that. Any questions from the committee? Judd, any hands up?

DR. CURTIS: Not seeing any hands raised, Marcel. Before we move on though, we have -- Alexei has joined us. Alexei Sharov, would you test your audio and state your name and affiliation for the record?

DR. SHAROV: Yes, and good afternoon. Alexei Sharov, Maryland Department of Natural Resources. Sorry for missing the first few minutes of the meeting. Thank you.

DR. REICHERT: Thanks Alexei. Welcome.

DR. CURTIS: Thanks, Alexei, and Erik Williams has joined us as well. Erik, if you would like to check your audio.

DR. WILLIAMS: Sure. Hey, Judd. Erik Williams, NOAA Fisheries, Southeast Fisheries Science Center.

DR. CURTIS: Loud and clear, Erik. Thank you.

DR. REICHERT: Thanks, Erik. Good morning. Nikolai --

DR. CURTIS: Still not seeing any other hands. I'm not seeing any other hands.

DR. REICHERT: I've got one quick question, and so you probably mentioned that the Lbar -- That was based on all data, for all years, right?

DR. KLIBANSKY: That's right.

DR. REICHERT: LC and Lbar.

DR. KLIBANSKY: That's correct.

DR. REICHERT: Okay. Thanks. No other clarifying questions?

DR. CURTIS: I've got Jim Gartland, and then Alexei.

DR. REICHERT: Okay. Jim, go ahead.

MR. GARTLAND: Thanks. Nikolai, first of all, as always, awesome work. Just a real simple question. I know you presented this to the Mid SSC. Were there any pieces that they were uncomfortable with that we in the South didn't think of?

DR. KLIBANSKY: You know, the response from the Mid was generally -- I felt like, you know, they generally accepted my explanation for why the mean length methods didn't work, and, you know, there was no hesitation that I can recall to, you know, try to salvage those, and they, you know, mostly spent the time, really in both of those meetings, the joint meeting and the Mid-Atlantic SSC meeting, just trying to discuss what's to be done about, you know, the catch-based methods.

MR.. GARTLAND: Cool. Thank you.

DR. KLIBANSKY: Sure.

DR. REICHERT: Remind me who else had his hand up, Judd.

DR. CURTIS: Alexei.

DR. REICHERT: Alexei, go ahead.

DR. SHAROV: Thank you, Nikolai. Well, first of all, I'm not sure that I understood the explanation of why the mean length method didn't work. Can you summarize it in a few words?

DR. KLIBANSKY: Yes. and the biggest problem was that, internally, it was computing a lot of negative Fs, which were getting filtered out, and then the remaining Fs were -- You know, you get

this distribution, and so, when you filter out -- You know, imagine you have a normal distribution, and then you chop off everything but the upper tail, and, well then the sort of peak of that remaining distribution is extremely small, like close to zero, you know, and so, in the calculations, when those very tiny Fs get put into the calculation to compute the current biomass estimate, you end up with some very large biomass estimates, and then also just a huge distribution, a very wide distribution, because of the orders of magnitude difference between the smallest -- You know, the smallest Fs and the highest Fs, and so I think, you know, part of my takeaway from that was that the method is very sensitive to those inputs, and, you know, you could see that by just running it with different years of those Lbar and LC inputs.

As we'll see later, when I showed the southern -- The analysis for the south, it mostly comes down to that Lbar value, because, actually, like for the south and the north, I'll show that the size that full selection is about the same, but that mean size above that value is different.

DR. SHAROV: So what is your interpretation? Well, you are saying that the method is sensitive. I guess the method is sensitive, but our question is more like why do we get, you know, what we got, and that is the negative Fs, or low Zs?

DR. KLIBANSKY: I was just going to say I think that the -- You know, the Z estimates, when you get the Z estimates from that computation, and then subtract the M, and so I think -- I don't know if you can just call it misspecification, but they just are kind of not compatible.

DR. SHAROV: Right, and so what my interpretation, and I want to hear your sort of your feedback, because you obviously know the data better, and you sort of lived through the analysis, is that -- Well, either our length frequencies are not representative of the length frequencies in the population, which is possible, and we cannot verify that, and I'm sure that those length frequencies are representative of the size structure of the catch.

Well, at least -- Well, I said I'm sure, but I'm thinking that they are probably sufficient sample sizes for length frequency, and that one was measured, obviously, with the high precision, and so, if we assume that these length frequencies are representative of the population size frequency, wouldn't that mean that essentially the size frequency of the catch, and we're saying and the population, is such that the effects of the fishery are insignificant, and that is the fishing pressure, considering the level of fishing mortality.

We cannot see the signal of the truncation in the size structure of the population as a result of the fishing activity, and, therefore, if we do believe the size frequency, and that it's representative, then we're saying that we are likely to conclude that the F is indeed, you know, close to zero. Well, it's not zero, obviously. I mean, we have a catch, or, alternatively, we could talk about the non-representatives of the sample sizes, or are the sample sizes being taken only from particular sites, that are not representative of the whole population, and so what do you think? What do you say on this? What do you think?

DR. KLIBANSKY: Well, I mean, I guess part of my problem with the mean length methods is that they are so sensitive to those, you know, estimates from the different mean length distributions, and so I ultimately decided to use the aggregate, you know, all of the lengths from all the years, but I showed that this plot here, that if you -- You know, depending on which -- If you were to separately use, you know, the distribution from individual years, you get really widely-ranging Zs,

and so, you know, maybe you would want to use a more recent distribution of lengths, but I think you would do that if you really thought that the distribution of lengths was really, you know, representative over time, and, you know, looking at the numbers of trips, there were very few trips. The numbers of trips per year, after 2013, was really low, something like three to eight, and so I was thinking, well, you know, I don't think that that's really representative.

The other bit is that the method is supposed to -- It is assuming that the population is at equilibrium, and, you know, I don't know what you all think about that Beverton-Holt mean length estimator equation, but, from the things that I've read, it tends to be pretty sensitive to that assumption, and, you know, is not advisable when the population is not at equilibrium.

DR. SHAROV: Yes, but that would be if there was a sort of a significant variability in the year class strength that would sort of mask the effect of the fishing pressure, which I might be wrong, but, in the case of the species, you know, I don't generally expect there to be, you know, wild fluctuations in recruitment level, but, just out of the basic principles, and say that the F was at least like 0.3.

I mean, if we are removing roughly about, you know, 30 percent of the population, we definitely should be able to see the truncation in both age and size composition. I mean, you can just plot it, sort of, you know, your theoretical curve here, in -- You know, quickly in R, or Excel, and you could demonstrate that we should be able to detect the changes, and, if we're not, or there is a lot of variability in estimates, that tells me that there is no clear signal, and so there is no clear signal of the sort of consistent truncation. That's my interpretation, or at least the thing that I could offer, and you might disagree with it. On the catch, the average catch methods, can you --

DR. TURNER: To that, to the previous discussion, please.

DR. REICHERT: Yes, and I -- Yes, and I do want to point out, and maybe I'm misinterpreting Alexei's comments, but remember -- I want to remind the committee that, ultimately, the mean length method was not chosen, during the review, as the method that was recommended for providing catch advice, and so I just want to remind everyone of that. Steve, go ahead.

DR. TURNER: Just I wonder about some of the other inputs, such as steepness. You know, I'm not real familiar with steepness for longline species, but 0.8 seems a bit high for me, and so I wonder if there's other problems in this analysis than just the length composition, but I do like Alexei's comment that length composition hasn't changed a lot, and so maybe we're not having a large impact on the population. Thank you.

DR. REICHERT: Thanks, Steve. Alexei, I think you started asking a question about the other methods.

DR. SHAROV: Yes, and, I mean, it is comforting to see that the average catch method provides us with the, you know, clearly expressed maximum and the relatively narrow distribution, for obvious reasons, and, you know, at least to -- Well, I mean, all three curves more or less overlap, which means that -- Well, the truncated one, that whatever intervals of years are used, I mean, and they're just a little bit shorter, but it just tells us that there was not that much of a difference in the variability in the catch, and, therefore, they're about the same. Then the third one is -- Well, it's 70 percent of what? 70 percent of what, and I'm sorry, but I forgot.

DR. KLIBANSKY: Yes, and it's 70 percent of the -- CC4 is just 70 percent of CC1, and so it's 70 percent of, you know, the average catch of the five most recent years.

DR. SHAROV: Right, right, right, right, and so could you remind why the 70 percent was, you know, offered as an option? I should have known, but I don't, and, I mean, does it add any new information to us when we plot the distribution that's based on the 70 percent of the average catch, and that just moves it to the left, or to the right, does it not?

DR. KLIBANSKY: Right, and I mean, it's -- The only reason that the distribution is different is because it's a different set of, you know, runs, because it's like just a different set of randomized runs.

DR. REICHERT: Okay.

DR. SHAROV: So, essentially, I mean, what we've learned here, and I'm almost done, but what we've learned here is that -- Well, we have some information on what catch looked like, and here is what is its distribution, and, if our effort didn't change much, then the population probably didn't change much. because our catch didn't vary much, but there's nothing that tells us actually about the other parameters of the population, or, here, it's not entering this equation, nor age structure and size structure, and so --

DR. REICHERT: Alexei?

DR. SHAROV: Yes.

DR. REICHERT: I want to make sure that we are -- I feel that we are moving into the discussion phase, unless I misunderstand you, and so I want to make sure that we leave enough time for that, and so, if it's a clarification of the presentation, please go ahead. If it's part of the discussion, maybe you can hold that thought until we are discussing the assessment and our recommendations. Does it make sense?

DR. SHAROV: Yes. Sure. No, and I think I've sort of clarified, at least for myself, whatever I wanted to hear. Thank you.

DR. REICHERT: Okay, and, again, I don't want to interrupt people, but I want to make sure that we get all the clarification questions out of the way, and then we can continue a discussion about our recommendations later. Thanks, Alexei. Any other hands up for clarifying questions? Judd, any other hands?

DR. CURTIS: Fred Serchuk, and then Jeff Buckel.

DR. REICHERT: Fred, go ahead.

DR. SERCHUK: Can we go back to the very last slide that you presented, the one before that, that showed the range of the catches, and it had an M on it? Not this one, and the one after that.

DR. KLIBANSKY: This one? This is the estimates of Z on the Y-axis.

DR. SERCHUK: Yes, but -- Okay, and what does the M refer to?

DR. KLIBANSKY: The M is natural mortality.

DR. SERCHUK: Okay, and so would the interpretation -- Would this be a correct interpretation, that natural mortality is the driving force, in terms of Z, particularly since 2020, and, actually, you know, since 2016, that most of the Z comes from the M. Would that be correct?

DR. KLIBANSKY: Well --

DR. SERCHUK: M is higher than the total Z.

DR. KLIBANSKY: Right.

DR. SERCHUK: Okay, and I'm just wondering what your interpretation of that is.

DR. KLIBANSKY: I mean, I think that's the right interpretation, you know, if you buy the Z estimates that come out of that calculation, you know, because the Z estimates are -- The Z estimates are a function of those --

DR. SERCHUK: M to the F, right?

DR. KLIBANSKY: Well, yes, but, you know, like, if we just go back, the Zs are a function of the von Bertalanffy growth parameters that come out of that fit to, you know -- Let me go back for a minute, and this fit to these data, which are -- You know, we did a lot of work on this, and, you know, Wally ran a lot of different models, but, you know, they were -- Those models themselves were variable, and came up with a range of parameters, and, you know, so there's some -- There's certainly some uncertainty in there, and the potential for things to change, if we put it in different -- If we could use the different growth model, and you can see there's a lot of variability around in length at age, and so, anyway, so that's baked into the calculation, and then -- Sorry, and I'm flipping back through, to find where I was. Then so these different Lbar and LC values, you know, are computed from the annual distributions of length compositions to make this figure.

DR. SERCHUK: Okay. Thank you.

DR. REICHERT: Thanks. Jeff, go ahead.

DR. BUCKEL: Thanks, Nikolai, for the great presentation. On slide 10, the length comps from the longline data, I'm just curious if folks -- You know, the expert panel talked about this some, but, you know, it looks like some of the smaller fish, or after around 2015, are not -- Those yellow colors are no longer present in the last ten years or so, and I didn't know if folks talked about potentially lower recruitment, or if there are other data, maybe from SADL, that are pointing in that direction, and I'm just curious about, you know, another metric that you don't get from these data-limited approaches, and if there was any discussion about that, any other anecdotal information that recruitment might be low in recent years.

DR. KLIBANSKY: Yes, and so, well, blueline is -- Well, to answer quickly, I don't recall talking about that. I see your point. A couple of things I'll point out is, one, from 2013 on, you know, these represent like three to eight trips from longline fishery, and so I kind of try to look at them, you know, and not squint too hard, because -- I don't know, and maybe I'm overly, you know, cynical, or skeptical, but, you know, there's a lot of potential for that to be representative of very localized variation, which I think is really important in blueline.

I think we don't totally -- I'm really interested to see what we'll learn from the SADL survey, going forward, about, you know, the fine-scale distribution of blueline, and then I'm, you know, also interested in the fine-scale distribution of the fishery, because I think it's unclear -- You know, it's unclear to me anyway to what degree fishing is operating on kind of like very local spots, that might have, you know, their own kind of size history, that may not be representative, or maybe get remodeled when we look at all the data together.

DR. BUCKEL: Thanks. I forgot you mentioned that there were very few trips, and so that makes sense, that they just may have been localized. Then the last question I had was if -- I'm curious about the comparing slide 24, that used the full time series for the catch, the TAC estimates, versus slide 29, where you limited it to 2015, and, you know, you see these, the medians for the TACs, are lower if you just stop at 2015, and I just was just curious if folks had discussion about that, right, and you don't have these recent years, where you're in the 900,000-pound annual catches, and, without those, you end up having these lower TAC estimates that just -- You know, if it was the year 2016, and you just had data through 2015, you would get a different TAC, right, compared to what you have from slide 24, and so, again, just curious if there was any discussion about that.

DR. KLIBANSKY: I don't remember having discussion about that, and I tried to frame this as just a sensitivity run, but certainly what you're saying is like -- I mean, it's what we would expect from those methods, which are really -- They're just average catch, you know, over a time period, and I'm scrolling back, because I'm going to just pull up like the removals.

You know, this is the removals history north of Hatteras, which we spent a lot of time on, and, you know, it's broken down in more detail in the report, and so you can see like where the different removals are coming from, whether it's, you know, Mid-Atlantic or what is what you'll hear about later and is known as the sliver between Cape Hatteras and the North Carolina-Virginia line, if it's recreational versus commercial, and so on, but, overall, I mean, we see the removals have gone up a lot, right?

If you drew a -- If you just put a line here, you can see -- I think I computed at one point, just because I was curious, and it's something like, you know, increasing at a rate of like 25,000 pounds a year over time, and so assuming that, you know, that's something that needs to be kept in mind when trying to set catch limits, is that these average catches are -- You know, if you were to fit a moving average, it's varying substantially over time, and it's not like those are catch levels that have leveled out over time, like -- You know, in the south of Hatteras, you see that the average catches are pretty stable over the last thirty years, or something like that, but clearly here we have this increase over time, and so I think like if you were to look at where we were in 2015, and it's like more down here, and so those TACs would be lower because of that.

DR. REICHERT: Thanks, Nikolai. We appreciate it. I would like to move on to our next presentation. We still have a lot to go through, and so that's the SADL, correct? Again, Nikolai,

thank you so much, and I hope you can stay with us, in case questions come up later in our discussion.

DR. KLIBANSKY: Yes, and I'll be here.

DR. REICHERT: Again, thanks for your hard work and your presentation. Judd.

DR. CURTIS: Okay, and, next up, we have Kevin Craig, from the Southeast Fisheries Science Center, providing a quick presentation on the SADL survey, and, Kevin, would you like me to drive on my end, or would you like control of scrolling through?

DR. CRAIG: Yes, and if you can -- If I can do it, Judd, if you can just share it, or pass the control to me, and I can do it from my version.

DR. CURTIS: We're encountering the same issue we had with Nikolai, where you're logged in through the web browser, which disables the ability to be the presenter.

DR. CRAIG: Okay. Hold on one second.

DR. REICHERT: Can you drive the presentation, Judd?

DR. CRAIG: We can do that, in the interest of time. It will just -- There's some slight modifications to what I had, but they don't have -- They're not going to have any consequence, and so, if you want to do it from your end, that's fine.

DR. CURTIS: Okay, and I'm just going to do it from my end, in the interest of time. Thanks, Kevin.

DR. CRAIG: Okay, and so I've got about ten or twelve slides. This isn't new information. This is stuff I think most folks have seen before, but I'm going to give a brief overview of the SADL survey, as a prelude to Paul's presentation on the approach to the allocation. I'm not sure which presentation you have, Judd, but go to the next slide. This looks like a pretty -- Keep going. This is pretty different, and so this is a --

DR. REICHERT: Kevin, maybe you can just quickly log off and log on through the webinar. I think that ultimately will save a lot of time.

DR. CRAIG: Okay, let me do that.

DR. REICHERT: Thanks, and I just want to remind the committee that we have indeed seen this, and there was a subgroup of the South Atlantic SSC that reviewed the SADL survey a couple of years back, I think in 2024, or 2023.

DR. CURTIS: While Kevin is getting logged back on, Fred Scharf did have a question earlier, and we can go to him.

DR. REICHERT: Okay. Go ahead.

DR. CURTIS: Fred Scharf now appears offline. Never mind.

DR. REICHERT: Did he put it in the comment box, or he raised his hand?

DR. SCHARF: Can you guys hear me?

DR. REICHERT: Yes.

DR. SCHARF: Okay. If Nikolai was there, I just had a question for Nikolai about the -- You know, in the previous presentation, you used the Beverton-Holt equilibrium mean length equation to estimate Z, and, you know, one of the multipliers in there is K from the von Bertalanffy curve, and I was just wondering if, you know, the update -- You know, there was an update in some of the life history parameters, and it seemed like K was the most uncertain, right, you know, based on the -- When you look at the length at age plot, right, there's a really big cloud around variability in length at age in those young and middle ages.

I'm just wondering if part of the negative -- You know, if K is just a little bit higher, then you don't end up with the negative, you know, negative estimates of F, right? You don't end up with Z below M, and I'm just wondering if, when you guys had those, some of the workshops, if you looked at the influence of K, you know, on some of those estimates of Z.

DR. KLIBANSKY: Hi, Fred and the quick answer is, no, we didn't look at that. We really were just working on trying to get the best growth curves out of the data, and the modeling was afterward, but I will point out that, you know, I think that -- You know, we had -- A lot of work went into getting all those age data together, and fitting the growth models, but I was surprised to see that. in the end, that the model estimates that we got, including the CVs, were actually very similar to what came out of the meta-analysis that we did in SEDAR 50, with the exception of the T0, which was much lower here than -- But it doesn't get used as much in the functions.

DR. SCHARF: Okay. Super. Thank you. I appreciate it.

DR. KLIBANSKY: Sure.

DR. REICHERT: Yes, and then, I mean, those low Zs are generally also representative of catch data, rather than population data, because you're kind of missing the anchor. All right, and is Kevin back, Judd?

DR. CURTIS: Kevin is back. He's still showing that he's logged on through the web though. I just sent him a message, and he needs to log out and log in through the desktop application to be a presenter.

DR. REICHERT: So is the translation that we have the same problem we had before or --

DR. CURTIS: Correct.

DR. REICHERT: Okay, and then what I'd like to do -- It is ten o'clock. Let's take a five-minute biological break, so we can solve these problems, and then we come back at five past ten for Kevin's presentation.

(Whereupon, a recess was taken.)

DR. REICHERT: All right, it's 10:05. I hope most people are back, or everyone is back. The next break, or at lunch, we'll put up a list, and so, when you come back from a break, or from lunch, maybe you can raise your hand, and then Judd can indicate that people are back, so we know that we can communicate that. So, Kevin, it's my understanding that you're ready to go?

DR. CURTIS: Kevin, you should be able to unmute yourself.

DR. REICHERT: Is Kevin with us?

DR. CURTIS: Yes.

DR. REICHERT: Okay. Kevin, go ahead.

DR. CRAIG Okay, and what are you seeing on the screen? Are you seeing a presentation view or --

DR. CURTIS: Let me make you presenter. Okay, and you should have gotten a cue now to share your screen. There we go. We're seeing the -- Switch to your display settings, and we're seeing the notes slide.

DR. REICHERT: There you go.

DR. CURTIS: Okay. All right. Looking good, Kevin. Thank you.

DR. CRAIG: Yes, and it's obviously been a while since I've been on a webinar. Let me do this. Okay, and I'm going to give about a ten or fifteen-minute overview of SADL. I don't think there's much here that you haven't seen, or aren't familiar with. This is mostly going to be a refresher on the SADL survey, as a prelude to Paul's talk on the approach to the allocation, and so I'll go over the survey design, and the data collection, focus a little bit on what we were able to do in terms of the northward expansion, and then show some preliminary data summaries.

SADL is a fishery-independent deepwater longline survey. It's intended to provide the normal stock assessment inputs. It's a multispecies survey, but, in effect, there's three focal species, blueline tilefish, golden tilefish, and snowy grouper. It was first implemented in 2020. We've done it annually since then. The sampling typically occurs in late July to early October, and it's a cooperative effort with industry.

We use standardized gear, standardized sampling methodologies. The Southeast Center, along with SC DNR, generate the sampling sites. We provide those to the fishermen. They execute the survey, and then we have observers on board who are collecting the data.

The original survey covered the jurisdictional waters of the South Atlantic Council, and it extended from the North Carolina-Virginia border through the Florida Keys. There were four zones, shown here in the different colors, and these don't have an effect on the survey design. They're intended

to help us administer the survey with the industry participants, and so each industry participant bids on sampling in one of these four zones.

The stratification of the survey is based on latitude and depth, and so the depth range is from seventy-five to 366 meters, shown here, and the stratification is based on latitude along the coastline, and then one degree of longitude when you get to the Keys, and two depth strata, a shallow strata and a deep strata, which are a little hard to see here, but this line that's bisecting these colored zones delineate the break between the shallow and the deep strata.

This is the gear. I'm not going to go through the details of it, but it's a three-mile longline. It's baited with squid. We do get depth and temperature information at each set. These are examples of the industry vessels that are actually conducting the sampling, and it's conducted over that July to October period in a number of trips.

They typically last from two to three days, up to, you know, a little more than a week, and the industry participants are sampling three to four sites per day, during daylight hours, from that late July/early August to mid-October period, and we have a hard stop in mid-October, because of right whale migratory issues.

The data that's collected is the typical survey data, or station data, the date, location, depth, time, bottom temperature. As I mentioned, it's a multispecies survey, and so everything gets identified, measured, and counted, and then we collect biological samples, which are primarily otoliths and reproductive tissues, according to a list of priority species, and sort of lower priority or non-priority species, and so the priority species are, in effect, golden, blueline, and snowy grouper. We rarely see these other species, and then the non-priority species are other sort of managed snapper grouper species.

In 2023, we started working with the Mid-Atlantic Council on an expansion of the SADL survey into the Mid-Atlantic waters. We did that in 2023 and 2024, and are intending to do it again this year, in 2025, but, in effect, we extended the SADL survey, as it was conducted in the South Atlantic, to the Mid-Atlantic, using the same stratification scheme and the same sample allocation process.

On the right, it shows the full kind of distribution of the survey, with the strata labeled with these numbers for the latitude, and then whether it's shallow or deep, and then you can see the expansion to the Mid-Atlantic here in blue, and then on the left, blown up, and so the area north of the border are the additional thirty stations that were sampled in the Mid-Atlantic, using the same method, and so it's basically the same depth stratification, the same latitudinal stratification, and we just extended the survey up to 39 degrees north, which is just the northern edge of Delaware Bay, and so that added thirty stations annually north of the North Carolina-Virginia border, and, you know, as I mentioned, we did this over two years, 2023 and 2024, and we intend to do it again this year.

You can see this is the distribution of sampling effort, and so these are just the sites that were occupied, where longline sets were made, and then the right is just a blow up of this northern area, and that encompasses North Carolina and the expanded sampling in the Mid-Atlantic.

This shows the blueline distribution for those two years, and 2023 is on the left, and 2024 is on the right. The black dots are the zero stations, where no blueline were caught, and then the symbols

are the -- The sizes are proportional to the lower third, the middle third, and the upper third of the blueline CPUE for that particular year.

Blueline have a pretty bifurcated distribution, at least, you know, according to the survey, and catch rates are pretty high in the northern areas, and fairly low catches along most of the coast, and then moderate catches in the Keys, and it's been fairly consistent for those two years where we were able to sample in the Mid-Atlantic.

This is looking at that same map slightly differently. This is the proportion positive in each one of those four sampling zones with the Mid-Atlantic waters, kind of designated as "MA", and so, on average, it's about 20 percent positive, but it varies quite a bit geographically, with most of the stations with positive blueline catches in that Zone 1 area off of North Carolina and in the Mid-Atlantic, and then, again, you know, in that Zone 4 region in the Keys.

This just gives you a sense of the length and age compositions that are available to the survey, and so it is a single-hook type. We don't have multiple-hook types, and that hook probably has some, you know, selectivity associated with it, but, if you look at the lengths, on the left, this is the blueline length distribution for all of the length samples that were collected for the past five years, shown in the bars, and then the two particular years, 2023 and 2024, are shown as the lines, and then the same thing for the age distribution on the right.

I think, you know, the point here is that there is a range of lengths, about a threefold range, that are available to the survey, with a modal length of about sixty-five centimeters, and so that's roughly twenty-five inches, or about two fee, and I was noticing Wally's growth curve, and so those fish could be anywhere from age-one up to age-thirty or so, based on the growth curve. Then the median age of the fish that we sampled is eight years, but they range from sort of one to forty, and not a lot of evidence of strong, you know, interannual differences, but, again, it's only a couple of years.

This survey was reviewed by the South Atlantic SSC about a year-and-a-half ago, and these are some of the statements from that review that are in this report, but I think the synopsis is that the current sampling design, the gear, the methodologies, and so forth were acceptable. We are looking at some other kind of sample allocation schemes, both whether we can, or should, allocate our sampling effort differently to the different strata. It is a constant number of stations per each strata, and we're not allocating that effort proportional to strata area, and so these are some things that we're looking into to see if we can optimize the survey across the different focal species.

Again, we don't have habitat information, and so this is one of the limitations. We're only getting bottom temperature and depth. Blueline tend to be structure associated, but that's unknown, I think, in large part, the distribution of habitat at those depths, and the sampling is sort of random with respect to whatever the distribution of habitat is at the strata level.

As you know, this data is working its way into the assessment process. It's been used in some form, some degree, in the golden assessment, and then, as Nikolai showed in his presentation of the blueline assessment, we haven't really used it to develop indices yet. I think that's something that we'll be doing in the next year or so.

We've given this presentation a couple of times, both to the Mid-Atlantic joint working group as well as the Mid-Atlantic SSC, and now the South Atlantic SSC, and so hopefully that gives you a broad kind of overview of the survey and sort of reorients you to what Paul is going to talk about, in terms of how the survey was used to inform proposed allocation schemes, and so I think I'll stop there.

DR. REICHERT: Thanks, Kevin. I appreciate that. Any clarifying questions from the committee? Judd, any hands up?

DR. CURTIS: Jim Gartland.

MR. GARTLAND: Just a simple question. How are you all looking for 2025? I know you said you plan to repeat all this again in 2025, but, given things, do you think that you're all good?

DR. CRAIG: We don't know for sure. You know, we have the funding for 2025, which is a positive. I think the question is can we move it in time? I think we will do the Mid-Atlantic, and that Zone 1 sampling, because that's funded by a slightly different mechanism. I'm reasonably confident that we'll do the rest of the survey, but, you know, it is going to depend on sort of getting the money to the places it needs to go in time.

MR. GARTLAND: Yes, and I've got you. We're all kind of dealing with the same thing. I just wanted to see how you all were.

DR. CRAIG: Yes, and so, you know, we've been working with the Mid-Atlantic, and their funding is a different kind of process than ours, and so we are going to move forward with another year of that Zone 1 sampling, you know, both north and south of the Virginia border, identical to what we've done the past two years. The funding for the rest of the survey, I think it's a matter of getting it to the appropriate people in time to do the survey, because we are sort of time limited, because of that October 15 stop date. You know, we have a hard stop, and so, the closer we get to that, the more the sort of vagaries of weather and other sorts of things play into our ability to complete the survey.

DR. REICHERT: Thanks, Kevin. Appreciate that.

DR. CRAIG: So optimistic, but not in the bag.

MR. GARTLAND: Understood. Thank you.

DR. REICHERT: No more hands, Judd?

DR. CURTIS: No more hands, Chair.

DR. REICHERT: Okay. Thanks, Kevin. I appreciate that brief overview. I suggest we go to Paul's presentation. Is that right, Judd?

DR. CURTIS: Yes, and that's correct. Paul, I've unmuted you, if you would like to test your audio, and I'll make you the presenter.

DR. REICHERT: I just saw you send that presentation out, correct?

DR. CURTIS: Yes, and so I put in the chat, as well as emailed to the SSC members, the attachment link for that SADL report that was reviewed in October 2023, for reference.

DR. REICHERT: Okay. Thank you.

DR. NITSCHKE: Can you see my screen?

DR. CURTIS: We see your desktop.

DR. NITSCHKE: You do? Okay. That's good. All right, and it's in full screen mode.

DR. CURTIS: It's still in your desktop. It must be on another screen.

DR. NITSCHKE: How do I switch it?

DR. REICHERT: You may have to move your presentation into the screen. There you go.

DR. NITSCHKE: I don't know if I can get it -- You probably can't get it in full screen mode here though. Is that --

DR. REICHERT: That will work.

DR. NITSCHKE: That will work? Okay.

DR. REICHERT: Thanks, Paul.

DR. NITSCHKE: All right. I'm Paul Nitschke. I work for the Northeast Fisheries Science Center for population dynamics. I'm going to be just presenting what I presented at the Mid SSC. This is just the ABC proportional estimation that we did for blueline tilefish. This is basically breaking up the survey between the Mid-Atlantic versus the North Carolina-Virginia line to Cape Hatteras, otherwise known as the sliver, for short, and the lack of a better name for that area.

Before I get into what we did this time around, I just want to give a quick summary of what we did last time. So, last time, this estimation was based off the 2017 Mid-Atlantic longline pilot tilefish survey. This is a stratified, random stratified, design and the latitudinal breaks in that survey came from the Northeast Fisheries Science Center bottom trawl survey.

The other important difference here is, in this survey, the number of stations in each strata was proportional to the area. Well, I should say approximately proportional to the area, because there was a minimum requirement of three stations, and so it's not exactly proportional, but somewhat close to that, and so, since we used the bottom trawl survey, of course, those latitudinal breaks don't line up with what we were trying to do here at the time.

We didn't quite go all the way down to Cape Hatteras, which is that red line on this plot, and the jurisdictional line between the states is also a little bit off, and so there was a sensitivity done where we increased the area weighting for the southern strata.

In that survey, I guess one of the biggest concerns was we only caught seventy-five blueline, and so we're asking a lot of these seventy-five fish in this survey. The other thing to note here is, north of New Jersey, the catch rates really drop off. You catch fish sometimes around Hudson Canyon, and sometimes in Maryland occasionally you catch a fish, but the population really drops off to the north.

Ther were several options presented at the time, one with just the raw numbers of fish between the Mid and the sliver area. This was an option because of this number of stations being proportional to the area. However, it's not the preferred option, because it's not exactly proportional. There's better ways to do it.

The second option was just determining the stratified estimate in the survey and then proportioning out that stratified estimate between the Mid and the sliver area, and so that's option two, the straight estimate, proportioning out the two chunks, and the third option, which was used, was adding this 25 percent adjustment to the South Atlantic strata, and that's where the proportions came from last time around, and so, basically, this time, I just want to reproduce that analysis, but using the 2023 and 2024 SADL survey.

Like Kevin said, the SADL survey design is a little bit different. The number of stations in each strata is not proportional to the area, and there is this area expansion, as you go north, just based on the geography, and so that's something important to consider here.

I used the data between these two red lines in the survey. To the southern line, the opposite issue occurs now, where the SADL survey actually covers more than where the Hatteras line is, and no adjustment was made for that. It's assumed to be a minor effect, and, actually, doing an adjustment in the opposite direction is a little bit more problematic. To the north, there's no sampling north of 39 degrees, and the assumption here is there's no -- The population north of that line is minimal, and is not very significant. Like Kevin said, the boundary was specifically broken out in this survey, and so that’s why 36 is broken in half.

So, in 2023, 518 blueline were caught in this area, and so this is a big improvement from the pilot survey. We caught quite a bit more fish, and so, in this survey, I did notice, in that northern strata, there seems to be a quick drop-off in the catch rates, and so I did produce a sensitivity run, thinking that maybe there's a drop-off there, just to see what effect that has, but nothing screws up a good story like adding more data, and, in 2024, of course, there was a big station up north, in that area, and, in 2024, again decent catch rates, of 563 blueline caught in this area.

Here's just the breakdown of the raw numbers for 2023 and 2024. In the red boxes are the raw numbers, but, once again, here we don't really think it's a good idea using these numbers, because the number of stations in each area are not proportional to the area.

If you look at the area breakdown here, you can see that, in the Mid, versus the South Atlantic, 80 percent of the strata areas are in the Mid, versus the South Atlantic. However, the percent positive switches, right, and so there might be more areas in the Mid, but the percent positive is actually higher in the South Atlantic.

This is just to show the spreadsheet of how the calculations were done. If anyone is interested in the spreadsheet, I'm happy to send it to you. It's just to show, you know, the number of stations, the mean catch rates in each strata, and the CV calculations, and, basically, we're just, you know, estimating the stratified mean and then breaking out that stratified estimate based on the north, the northern part, and then the southern part, the yellow here being in the South Atlantic.

Perhaps the easiest way to think about this is just to estimate the expanded numbers, which is simply the mean numbers per haul times the stratum area, and so you can get these expanded numbers and then just do the proportions on that. You get the same result, and so that's good. It's basically the same calculation, but maybe a simpler way to think about it.

Here are the estimates for 2023 and 2024. The stratified numbers per haul were actually pretty similar between the two years, at 12.8, versus 13.6 in 2024. However, the CVs are pretty high. This is still a very patchy critter, and there's quite a bit of variation, and it so happened too that the proportions between the two years are also pretty similar, but note that the CVs are pretty high.

The reviewers chose to combine the two years, 2023 and 2024, to get a combined estimate, which produces that 70-30 proportion, and then quickly did a couple of sensitivity runs. One was to reduce that strata area to the north. That actually didn't have a big effect on the proportions. The second sensitivity was, instead of using numbers of fish per haul, to base the CPUE on numbers of fish per hook retrieved, and most of the stations had the 450 hooks that were set out, but there were several that were a little bit lower. At the end of the day, this actually didn't have a big effect on the estimates, and that's my quick summary of the method.

DR. REICHERT: Thanks, Paul. Any questions from the committee? Any hands up, Judd?

DR. CURTIS: No hands raised, Marcel.

DR. REICHERT: Okay.

DR. CURTIS: We've got one from Alexei.

DR. REICHERT: Alexei, go ahead.

DR. SHAROV: Thank you, Paul. Could you remind us what's known about the gear selectivity, the hook selectivity? I remember you, or somebody else, presented the effect of the study of different size hooks, and I think there was not much of a difference, and what is known about the selectivity of the selected hooks that were used in the study in relation to the different size of the fish?

DR. NITSCHKE: In the pilot survey, several different hook sizes were used, and there was some indications of some slight differences in selectivity, in terms of sizes. I guess the big difference was the catch rates between the hook sizes. However, in the SADL survey, only one hook size is used. Does that answer your question?

DR. SHAROV: Yes. Thank you. Not to full satisfaction, but to the extent that you have the information. Thank you.

DR. REICHERT: Thanks, Alexei. Thanks, Paul. Any other hands? Seeing none, Paul, again, thank you very much, and I hope you can stay with us, in case any questions may come up later on the methodology, and, again, thank you for your work on that, and that of others. Next up is Jim, who will provide an overview of that SSC subgroup review.

MR. GARTLAND: Can you all hear me?

DR. REICHERT: Yes, and we can hear you.

MR. GARTLAND: Awesome. All right. Judd is going to drive this one, because I have no confidence in my ability to share a screen, and so what I'm going to be talking about briefly this morning is just the joint review that was conducted on that northern component of the assessment for the blueline tilefish. It was joint between the Mid-Atlantic SSC and the South Atlantic SSC, and, although it was before my time, to my knowledge, we did something very similar back in like the 2017 or 2018 timeframe.

Just to give everybody a little bit of background on how the review went, as I said, it was joint between the Mid-Atlantic and the South Atlantic. The South Atlantic representatives were myself and Marcel, and then from the Mid-Atlantic Council, or, I'm sorry, or Mid-Atlantic SSC, we had Dr. Boreman, Dr. Jones, and Dr. Jiao, from Virginia Tech, and there were also a bunch of people on the call. We had a lot of support from staff members from both the Mid-Atlantic and South Atlantic Councils, and representatives from both the Northeast and Southeast Fisheries Science Centers were also there.

Again, you know, as I said, we were conducting a review of the assessment that was conducted for the portion of stock, the stock that was north of Hatteras, that was assessed using the DLMtool, and we had nine terms of reference that we were responsible for addressing, basically reviewing the application of the DLMtool, the data that were fed into the DLM package, and I guess it was in R, and then we were basically responsible for looking at those different management procedures, deciding which one we thought was the most appropriate for supporting management advice, and then working through an approach to split the catch between -- For north of Hatteras, between the Mid-Atlantic and the South Atlantic, and that's what Paul just presented there.

The workshop was two webinars. They were in the afternoons of April 21 and April 23. Without going into all the details, I will tell you that both of those webinars ran long. We spent a lot of time working through all this stuff, and thinking it through, and just one other piece I wanted to mention is the way we handled those terms of reference was, amongst the five of us, we were each assigned, I guess, a handful of the terms of reference, and so each person -- For example, myself, you know, I would lead two of them, and take all the notes, and then write the report, and the other folks on the review panel did the same thing.

Just to kind of briefly walk you through what the terms of reference were and what we had come up with for each one, the first term of reference was to evaluate the data that were input to the DLMtool. Dr. Boreman had this one. He basically brought up the suite of concerns that were identified following SEDAR 50, regarding the data that were available on blueline tilefish.

We noted, as a group, those -- In SEDAR 92, that had been addressed, and so the problems in 50 were addressed in 92. Primarily those revolved around the growth parameters, and so, instead of

using the meta-analysis that was done in 50, we actually had von Bertalanffy parameters on blueline tilefish for 92, that came out of South Carolina DNR, and then the recreational catch, and this is a big one, this changed from the Delphi method, which I won't go into the details, just to save time, but we moved from that to using MRIP estimates of recreational catch.

Then, again, like I said, of the list, there were still several that will need to be addressed for the next round, particularly including ageing, one of the reasons we couldn't get to an age-structured assessment.

In terms of the data that were available for SEDAR 92, the main data sources were removals, both commercial and recreational, and we also had data on length frequency. Those were presented earlier. Again, the MRIP data, for anybody who has worked with MRIP information, knows that, you know, there can be some issues there, and, in particular, with blueline tilefish, there were a number of years where the percent standard errors associated with the recreational catch, or, I'm sorry, the recreational harvest was highly uncertain.

Again, as was mentioned earlier, the length composition data came from the commercial longline fleet, and there were a number of years where we were dealing with less than ten observed trips, and most of them, as Nikolai said, ranging anywhere from three to eight trips per year.

Dr. Craig just presented the SADL survey, which I think the main theme there is we're kind of hopefully going to be able to rely heavily on that in the future. We've got a lot riding on that survey, which is why I asked about its possibility of being funded in 2025 and beyond, but that looks like it will be a real good source of information going forward.

Then, in terms of the last part of the data, the terms of reference, again, there were two topical working groups, one that was focused on the removals by the fisheries and the other one that was focused on generating the parameters from a von Bertalanffy growth curve. We reviewed the work of both of those topical working groups and found that the work they did was good and that the decisions they made throughout were justified.

For second term of reference, that was evaluating the methods that were used for the assessment. This is the one -- I was responsible for this one. We agreed, as a group that, you know, there weren't a whole lot of data available, obviously, on this species for the assessment, but, for the data that were available, the DLMtool was applied appropriately, and, in fact, we really highlighted the fact that Nikolai went above and beyond, with the mean length methods, helping us figure out, you know, or understand, why those curves didn't look like curves, but instead looked like straight lines for the total allowable catch.

As I kind of just mentioned, the two mean length MPs didn't produce viable results. We talked about that a bunch earlier, and Nikolai did a bunch of work, again, to show why that was. We basically had to go with the catch-based MPs for this assessment, because the length-based methods didn't work. In SEDAR 50, the catch-based methods were identified as kind of not preferred methods, and we wanted to go with the mean length methods, and we had to switch it this time, because the mean length didn't work, and so all we had left were the catch-based approaches, and, because of that, we went forward with saying the catch-based MPs were those that were suitable for providing management advice.

The third term of reference revolved around basically our understanding the status of the stock, or defining stock status, in terms of whether or not the stock is overfished or overfishing is occurring. Unfortunately, the DLM analyses do not give you any information on that, and so we were not able to really address Term of Reference 3 on stock status.

The DLM methods we have don't give any information on population size, or F, but we did, you know, do a little, I don't know, eyeballing things, I guess, for lack of a way of putting it, and, based on what we saw in the data, it seemed as though the stock is in decent shape, right, and so there's an increasing trend in the time series of catch. There is a fair amount of larger fish in the commercial longline fishery, recognizing, again, that the length frequency data we had was based on a limited number of trips, but we weren't seeing a loss of those bigger fish, and that, in both regions, for both sectors, both commercial and recreational, both were reaching their catch limits.

You would figure, if there was a problem with the stock, if the stock was down, maybe there would be some trouble in reaching their quotas, and, again, we had several members on the call who were representing industry. They noted that, in their work, or in their catches, they were still seeing larger fishes, larger fish, and they were still seeing a variety of sizes, and presumably ages.

Then this one I can speak to, and, in Virginia, we have a citation program, when you catch a nice big fish, and the number of citations in Virginia are increasing for blueline tilefish, meaning that more people are catching big fish, and similar things are being observed in Carolina and Maryland as well.

For Term of Reference 4, projections, you can't do that with DLM, and so we couldn't really address that one. In terms of the uncertainties, and, again, that one was mine. Given the data that were available, and the DLM tools that we could apply, we felt as though uncertainties were, for the most part, effectively addressed. Again, as Nikolai showed, you know, for the catch-based methods, and for the mean length ones, even though they didn't work, you do get distributions of total allowable catch.

Those are based on the bootstrap resampling of the data, but the thing I want to point out, for the catch-based methods, is the way that the resampling works is that you'll have your time series of harvest, and it resamples from those time series of harvest, which gives you kind of the between-year variability, but it doesn't propagate the within-year variability, for example the large PSEs from the MRIP program, into those TAC estimates, and so you do have estimates of uncertainty, but those are underestimates of uncertainty.

For Term of Reference 6, for the catch recommendations, and so, again, we were not able to use the mean length methods that were used in SEDAR 50, and so we were kind of left with the three catch-based MPs. We did not apply the Mid-Atlantic Council's risk policy, or control rule.

Basically what we did was -- Because the three catch-based methods were producing similar results, we decided that going with the most recent data, and so the catch over the last five years, was the appropriate approach, and we also decided not to go with the 70 percent of the total catch management procedure, just because we felt that that uncertainty could be built in later, and so, based on the output that Nikolai had for us, we used basically the median from the CC1 output, and resulted in an ABC of 646,000 pounds.

We want to point out that, since it was based on catch, and since the catch already has uncertainties, the quotas already had uncertainties kind of built into them, we felt as though that the outputs from CC1 represented an ABC, and not an OFL, and then, again, in our report, we suggested that both councils consider including a kind of a management buffer when they're setting their annual catch limits and annual catch targets, to kind of step down a bit from the ABC.

For the jurisdiction appropriation, again, you just saw this presentation from Paul, and so I'll just kind of step through this briefly. We considered two options to allocate the catch between the sliver and the Mid-Atlantic region. The first one was based on landings information, and the second was based on fishery-independent survey data. This is why the meetings ran long, because we spent a lot of time on this, but, when it was all said and done, we recommended using the information from the 2023 and 2024 SADL survey, and, again, those were the two years where that survey ran up to Delaware Bay, and so we had data for the Mid-Atlantic region.

As I said, we considered a bunch of different methods on how to apply the split using the SADL data, and the final recommendation that came out of the group was to use the combined 2023-2024 catch per haul, weighted by strata area, and I'm sure we'll be discussing this more today, but it was similar to the approach used in 2017.

That second green bullet there, the survey design and CPUE should account for spatial habitat variability, that's what we had decided on. However, there were some concerns about do each of those strata -- For each of those strata, does the entire area represent blueline habitat, and so that's where we got kind of hung up, and took a while working through, but, again, as you just saw, it resulted in splitting the ABC between the Mid-Atlantic and the South Atlantic, using basically a 70-30 split, and that's all we had, and so I'm happy to take any questions folks have.

DR. REICHERT: Thanks for that overview, Jim. Any questions? Judd, any hands up? I have a question for --

DR. CURTIS: If you have any questions, raise your hands. I'm not seeing any hands right now, Marcel.

DR. REICHERT: Okay . Judd, and others, ultimately, these recommendations from the subgroup were accepted by the Mid-Atlantic SSC as well as the council, correct, or where is that process?

DR. CURTIS: So the Mid-Atlantic SSC reviewed this a couple of weeks ago, all the recommendations from the subgroup report, basically the same framework as you all have just seen today with the blueline tilefish assessment results, the SADL survey overview, the ABC proportional estimation methodology, and then the recommendations from the subgroup, and the Mid-Atlantic SSC agreed with all the recommendations of the subgroup.

There was a lot of discussion over whether the estimate of the CC1 50 percent median represented the ABC, or it represented the OFL, and if there should be an additional buffer applied, because of that additional uncertainty, and a lot of good discussion occurred.

Ultimately, they landed on that it does represent the ABC, in accordance with the recommendations from the subgroup, because there was not a scientifically justifiable way to decrement from that value, and, if there was some change, or reduction, in that value, that would

probably be more appropriate to apply in the management risk framework, and so that CC1 recommendation of 646,000 pounds does represent the ABC. The Mid-Atlantic Council will meet I think next week to review the recommendations from the subgroup, and then their Mid-Atlantic SSC, and our council will be meeting in two weeks to review this product as well.

DR. REICHERT: Thank you, Judd.

DR. CURTIS: Jim had his hand up.

DR. REICHERT: Jim, go ahead.

DR. CURTIS: Sorry, Jim. Before -- One last thing I neglected to mention is one difference that was applied at the Mid-Atlantic region was that, because of the uncertainties surrounding the data inputs and the catch level recommendations, they made their ABC recommendation for just one year moving forward, and they requested that they look at additional information within the next year, whether that's another year of SADL survey information from the index or from other harvest and catch levels from the fishery, and revisit their ABC recommendation next year. Sorry, Jim, and go ahead.

DR. REICHERT: Thank you. Go ahead, Jim.

MR. GARTLAND: It was nothing important. I was just going to say the Mid Council is meeting next week, and so they haven't gotten to it yet.

DR. REICHERT: Okay. Thank you. Yes, and I specifically asked Judd that question because, obviously, our recommendations ultimately are not going to be made in a vacuum. If we, as an SSC, decide to make different recommendations, then that may affect the decisions that the Mid-Atlantic are making. Any other hands up for clarifying questions relative to any of the presentations we've had before we move into the action items? No hands up?

DR. CURTIS: No hands up.

DR. REICHERT: Okay, let's do a public comment.

DR. CURTIS: Sorry. One hand. Alexei.

DR. REICHERT: Okay. Alexei, go ahead.

DR. SHAROV: Jim, thank you. Could you please repeat your point on the sort of within-the-year uncertainty in the estimate that is not accounted for in the bootstrapping procedure? Are you guys referring to essentially uncertainty in the MRIP data, just the sort of annual estimate, or -- Just clarify, please.

MR. GARTLAND: Yes, for sure, and so it would actually be uncertainty in all of the harvest information, but, really, the MRIP had the greater amount of uncertainty, and so that would probably be the main driver, but, if you think of it this way, and, if you have a time series of harvest, right, and you're resampling from that, then what you're getting is kind of a -- You're quantifying, in essence, the between -- In a way, the between-year variability in the harvest, but it

doesn't account for the fact that each one of those annual estimates of harvest itself is uncertain, right, and so it doesn't build in, for example, the uncertainty in, you know, the year 2023, for example. You know, if you have a -- If your CV is, you know, 0.5, or 0.7, or whatever, it doesn't build that into the uncertainty of the TAC when you're putting it through the DLM tool. Did that make sense?

DR. SHAROV: Well, yes, and I was thinking of the commercial catch as being rather certain, and am I being mistaken?

MR. GARTLAND: No, and it is. I mean, there's probably a little bit of uncertainty, right, in everything, but, really, the main driver of the within-year uncertainty, that was not propagated into the TAC estimates, I think would be the MRIP uncertainty, the within-year MRIP uncertainty.

DR. SHAROV: Yes. Thank you.

DR. REICHERT: Anyone else? If not, let's do our public comment. Would anyone from the public like to make a public comment? Judd, any hands up?

DR. CURTIS: Yes. Captain Dewey Hemilright. Dewey, you're unmuted. Go ahead.

MR. HEMILRIGHT: Thank you. Can you hear me?

DR. CURTIS: Yes, and we've got you loud and clear, Dewey.

MR. HEMILRIGHT: I hope everybody received both of my emails. I apologize for maybe the second one not getting there, and I'll work offline to figure out how to make sure in the future that that's done. I participated in this, and I've been fishing for blueline tilefish since 2008. I participated in SEDAR 32, SEDAR 50, and I'm taking part in SEDAR 92.

Given the three presentations, it's real difficult for me to sum up the issues and problems that I see in a short time, but I'm going to go back to my first email that was sent out about the proportion of catch, and the big shift of 14 percent, given that the new issue is the use of MRIP data, with the uncertainty that's being used in the Mid-Atlantic, in that change, and I think you will see the PSEs, from the graph in the first email I sent, that shows you that.

Second of all, from Key West -- From Maine to Key West, the commercial catch of blueline tilefish, the ACL, is 144,000 pounds, since about 2019, is what the commercial catch is allowed in that whole area, and so the certainty is the commercial catch that's there. The uncertainty is the recreational catch, particularly with the sliver in my area getting tied into the Mid-Atlantic.

I wish that we had time that where the Mid-Atlantic, I mean the sliver area, was its own assessment in the population. When you look at the SADL work, you see there's only about -- Key West, Florida has fishery landings, and a little bit in South Carolina, and then you have northern North Carolina. Something I've requested, and I guess I haven't got to the right folks, is how about MRIP landings in every state, because what that's going to tell you, from MRIP landings in other states particularly, is blueline tilefish aren't everywhere.

It would also show where the uncertainty is in the MRIP data, which we all know, but, getting back to the proportion, a 14 percent shift is like -- What happens, and, you know, this survey that's being done is a random type of selection, in the three different sites in the stratas you're allowed, and what happens next year if it comes back and it says, in the Mid-Atlantic, that it's 85-15, and are we going to take another 15 percent from the sliver that's been producing fish, accounting for the fish, in all these years?

I just -- I see this 14 percent shift is highly -- An uncertainty of a shift that that's really not accounted for, and when we look at saying that, hey, in just two years of data, you know, we're going to have this shift, and so I propose taking all three of them, taking the pilot survey that was done in 2017, and taking the two years, and getting the average out of that, and, as you continue on, get an average out of the SADL, which is the best way, but it's only two years.

You know, you have to have five years, you all are telling me, to do abundance of species in the SADL to be able to be used, and how can we just go with two years of the SADL? We can't be going like a 14 percent shift, and so, with that, I'll wrap up, but I'm just frustrated in this whole process, because I think that we could draw down into what actually is being caught into different areas, and produce a better product, but I don't think the process allows -- Well, I know the process does not allow it, but I thank everybody for their time.

DR. REICHERT: Thanks, Dewey. I appreciate your input, as always, and I also appreciate your participation in the process, both within SEDAR and your comments to the SSC, and so thank you for that. Any other public comment, Judd?

DR. CURTIS: Not seeing any other hands raised, Marcel.

DR. REICHERT: Okay. Thank you, and so let's go to the action items, and I think we've addressed a lot of them already, and I also want to remind the committee that a lot of the details are provided in the subgroup report, of which Jim just gave an overview, and so does the assessment address the TORs or other requests from the SSC to the SSC's satisfaction? My notes are, yes, given the inherent uncertainty of the data-limited methods and the available data, and perhaps we can refer to the joint report for details.

I also want to say that. as someone mentioned earlier, I, and I think the SSC, appreciates the effort by Nikolai, the analyst, who went above and beyond to explain the issues with in particular the mean length methods, and his willingness to look at some other issues, and so I open the floor for any other comments relative to this action item, and I can provide that text to you also later, Judd. No hands? I'll provide the text for the other point. Jim Gartland. Jim, go ahead.

MR. GARTLAND: So I hate wordsmithing, but I'm just going to do just a touch of it. I would say "adequately addressed to the extent possible", just because there were a few TORs that we just couldn't address, based on the limitations of the DLMs.

DR. REICHERT: Exactly, and that's given the inherent uncertainties of the data-limited methods. Yes. Thank you. Seeing no hands, the second part, the second action item, does the assessment reliably capture past trends of the fishery and population? Again, I had written here, yes, given, again, the inherent uncertainty of the data-limited methods, and then, again, see the joint review report for details. Anyone else?

Seeing no hands, let's move to the third one. Does the assessment provide, and let me know if you need a little more time to write, Judd, but does the assessment provide a reliable quantitative estimate of current stock status, and, as we've heard before, the DLMtool does not provide a description of population dynamics, time series of abundance, biomass, or exploitation levels, and, in addition, they do not estimate the current population or status of the fishery, and, as we discussed before, the recommendation was that there is no OFL, and so OFL is unknown, based on the DLMtool analysis.

That's -- I just want to remind folks that that's consistent with what we've done in the past. If we have very little data, we basically state it in our ABC recommendations, that OFL is unknown, and then we gave ABC recommendations based on some other method. Any hands, or additions? OFL estimate and -- Yes, and we can basically say that OFL is unknown, because the ABC recommendation will come later.

Seeing no hands, does the assessment provide reliable predictions of future conditions to support fishing level recommendations? Again, the DLM cannot provide projections, or does not provide projection, and it provides a total allowable catch based on the time series of historical catches, and the average catch series is used in place of projections. Additionally, the DLM does not provide a measure of CV for the average catch series, and that was all part of the report, and part of what both Nikolai and Jim mentioned earlier, and that's text, I think, from the report. Additionally, the DLM does not provide a measure of CV for the average catch series. Any other comments relative to that?

DR. KLIBANSKY: This is Nikolai, and I don't know that I can raise my hand, but I just wanted to comment.

DR. REICHERT: Go ahead, Nikolai.

DR. KLIBANSKY: Just sort of that point that you're putting down, about the DLMtool doesn't provide a measure of CV, I think you're talking about that it doesn't have a way to incorporate like the annual CVs.

DR. REICHERT: Yes, and thank you.

DR. KLIBANSKY: Is that what you mean?

DR. REICHERT: Yes, and that's a much better way to list that. Thank you for that, and please speak up, if you can't raise your hand.

DR. KLIBANSKY: I guess I also would just pointed out that, because of the way that the approaches work, in a way, that's not that much of a problem, because it's also not trying to estimate, you know, like a time series of F.

DR. REICHERT: Exactly, yes.

DR. KLIBANSKY: That's why we get so wrapped around the axle about the PSEs for MRIP, but, in this case, like the way that it's dealing with the CV and catch is it's -- The CVs are -- You know,

it's a CV among the annual catch estimates over a period of which should -- If there's a lot of uncertainty in individual years, that should sort of manifest itself, and so even though it's not incorporating the PSEs, it should kind of be baked in there.

DR. REICHERT: Okay, and so do you think the current text is better representing what's going on, or maybe we can just delete that sentence entirely.

MR. GARTLAND: If I could jump in again, maybe we say DLMtool.

DR. REICHERT: I also saw Alexei's hand up, but Jim, go ahead.

MR. GARTLAND: Just I think we could leave that sentence if we say the DLMtool does not provide a direct mechanism. I think that's just to make it really clear that -- You know, the point that we were making as a review group, but recognizing what Nikolai said, that, you know, if your annual estimates -- If within your estimate is uncertain, then probably that's going to push into the between years as well, and so, yes, I get that.

DR. REICHERT: Okay. Thank you. Alexei, go ahead.

DR. SHAROV: Well, I had a correction, or a comment, to the same issue that -- I mean, what do we do with the bootstrapping? We actually are estimating the variance around the average catch for the time series, but, as you noted, we are not considering the variability within each annual estimate, and that's true, but --

DR. REICHERT: Okay. Thanks. Appreciate that. Anything else? Seeing no hands -- Jeff, go ahead.

DR. BUCKEL: On the first bullet, Marcel, the does the assessment reliably capture past trends in the fishery -- Sorry, the second bullet, the one that says, "yes, given inherent uncertainty", and I agree with that for the fishery part of that bullet, but I don't -- In terms of the population, I don't -- I would say no, in terms of the assessment providing past trends in the population.

DR. REICHERT: Thank you. That's a good point.

DR. BUCKEL: Thank you.

DR. REICHERT: Yes, and the DLM method -- The mean catch method doesn't -- Yes. Since we recommend a mean catch, maybe we can specify that, Judd, the mean catch DLM method, and then, above there, yes, in terms of the fishery, and so we are above the -- Thanks. Thanks, Jeff, and good point.

Seeing no other hands, let's go to the next point, identify, summarize, and discuss assessment uncertainties. On that first bullet point, I basically -- We can refer to the joint SSC review report, the joint SSC, the joint group, and I keep forgetting what we call that, the joint SSC review group report, and is there anything that was not in a report that people want to -- That SSC members want to add here? Seeing no hands, the next bullet point is describe --

DR. CURTIS: I'm sorry, Marcel, but a couple of comments just from the notes that I was taking. I think Steve Turner had mentioned that the steepest value of around 0.8, and I forget the exact value that was used, seems pretty high for a deep commercial long-lived species such as blueline tilefish, and, in addition, there was some talk of uncertainties with the ML-based methods being not viable. I'm not sure if that's where we'd want to add this, in here, or -- That is already captured in the subgroup report pretty well, and so we may have that captured, but, if anyone wanted to add any additional detail, please go ahead.

DR. REICHERT: Okay, and what's the pleasure of the group? Do we feel that that's sufficiently captured in the subgroup report? If you disagree that it's mentioned in the report, raise your hand. Otherwise we'll leave it as is. Thank you. All right. Seeing no hands, everyone agrees with this.

Describe risk and consequences of the assessment uncertainties with regard to status fishing level recommendations. I made a note that, given the available data and resulting assessment methods, the outcome of the assessment is highly uncertain, and I would like to just put this to the SSC, and one thing I thought is that the council should be --

That we may want to let the council know that the council should be aware that it is probable that an ABC recommendation resulting from the next assessment likely, or hopefully, will include SADL data, the deepwater longline survey data, and it may differ considerably from the one that we provided here. It may or may not be, but I think it is maybe good to communicate to the council, to communicate that point to the council, and I would like to hear from other SSC members whether you agree or disagree on that. Jim, go ahead.

MR. GARTLAND: I don't disagree. I just think that what you said there goes along with -- Is in line with what we came -- What came out of the review, which was basically us saying, as soon as SADL is ready, let's try it again.

DR. REICHERT: Yes, and I think, later, there is an opportunity for us to specifically say that, and, again, Judd, over lunch, I may provide you with some additional text there.

DR. CURTIS: Yes, and that sounds good, and, in addition, I will add any of the notes that people are contributing on the shared doc into the overview document.

DR. REICHERT: Okay. Sounds good.

DR. TURNER: Marcel?

DR. REICHERT: Go ahead.

DR. TURNER: This is Steve. It seems, to me, that basically the allocation between the sliver and the Mid-Atlantic is essentially based on two years of information, and certainly it would be preferable to have a longer time series to estimate that proportion.

DR. REICHERT: Yes, and I agree, and that goes back to the comment I made earlier. You know, when we have the next assessment, that includes more years of, in particular, the SADL data, that may affect the outcome of the assessment, as well as our ABC recommendations. Thanks.

DR. CURTIS: Steve, I apologize, and my earbuds were tuning out on battery, and so can you please add your comments to that notes document, and then I will ensure they make their way into this overview?

DR. REICHERT: Okay. Thanks, Judd. Okay. Fred, go ahead.

DR. SERCHUK: Thank you, Chair. I'm just wondering, and since we've now talked about the next assessment, do we have a timeframe, or do we recommend a timeframe, for the next assessment?

DR. REICHERT: There is an item later in our action items that specifically asks that question, and so, if you can hold your thought on that, we'll come back to that probably in a couple of minutes.

DR. SERCHUK: Okay. Great. Thank you.

DR. REICHERT: Okay. Thanks, Fred. List, in order of greatest contribution to risk and overall assessment uncertainty, and comment on the effect of the assessment factors that most contribute to the risk and impact status determination and future yield predictions. I basically wrote that lack of data, and the resulting data-limited method assessment -- There's no estimate of OFL, and I also mentioned, and I forgot who mentioned that, but it's the large size-at-age variability, and I made a quick like -- I looked, and a ten-year-old fish can be either 200 or 900, and I think it's millimeter length, and so variability in size-at-age.

Also, there is -- We don't have an estimate of OFL. I think that's a significant issue also, but that's, again, inherent to the assessment method. Anyone else? Again, I believe that the subgroup report also has a number of items listed that address this action item. Seeing no hands, let's move to the fishing level recommendations.

Is the assessment consistent with BSIA and acceptable for use in management? Again, my note is, yes, but given the available data and the data limited method, and that gets rather repetitive, but, you know, everything is conditioned on the use of the DLM method. Anyone disagree, or want to add comments? Seeing no hands -- Jim, go ahead.

MR. GARTLAND: I'm not sure if this is the right place to put this, but, just, you know, based on public comment that was made a short time ago, I think we should have some acknowledgement of the swing in the split. I'm not sure if that happens here, or below, but a big swing like that is something that should at least be flagged.

DR. REICHERT: Yes, and I think that I had that actually under the next one, because I think the proportion between the north and south of the North Carolina-Virginia border was not specifically in our action items, but, yes.

MR. GARTLAND: Just to flag it for the council, and that's all.

DR. REICHERT: No, and I agree. That's a good point to make, and we can -- It's okay if that -- Chris, go ahead. I saw your hand up.

DR. DUMAS: Thanks. Yes, I just wanted to follow up on the point that Jim just made, and also getting back to Mr. Hemilright's comments. I'm looking at the data he provided in his spreadsheet, and comparing the landings of blueline tilefish at Wanchese versus everywhere else, and, for the last, I don't know, several years, Wanchese is landing a lot more, compared to other areas, and the overall ACL is being achieved most times.

If we go with a proportion that decreases the landings allowed in that southern North Carolina area that are going to Wanchese -- If we decrease proportion of landings allowable there, are we going to increase discards significantly in that area, with that change in proportion? I just wanted to mention that as a possible risk, additional risk, with the significant change in the proportions.

DR. REICHERT: Yes, and keep that --

DR. DUMAS: I'll ask other folks if they have similar thoughts, or if they disagree with that point. Thank you.

DR. REICHERT: Yes, and keep in mind that it is offset, I believe, by the significant increase in the ABC, overall ABC, for the northern part. Do you know what I'm saying here, and so the sliver may be reduced, but the overall ABC is increased.

DR. DUMAS: I understand, but suppose -- That's for the northern part, right?

DR. REICHERT: Yes, and we are only talking about the northern part at this point.

DR. DUMAS: Right, but they may not -- I don't know, and they may not be able to catch it, and, if the southern area is catching close to their limit, and we decrease their limit, then that's going to potentially increase their discards in the southern area.

DR. REICHERT: Yes. No, and it's good to list that, but, ultimately, it's going to be one ABC for the entire region.

DR. DUMAS: Right.

DR. REICHERT: Alexei, does that address your --

DR. SHAROV: Yes, and I lowered down my hand I was looking at the --

DR. REICHERT: Hold on, Alexei, one second. Fred, does that address your question, what Judd just wrote down there, or maybe you can provide some additional text. Fred, can you still hear us, Fred Scharf?

DR. CURTIS: It was Chris. I thought it was Chris.

DR. DUMAS: It was me.

DR. REICHERT: Oh, sorry, Chris.

DR. DUMAS: Sure, sure. This is Chris Dumas. Yes, that does. Thank you. What Judd wrote, yes, and thank you.

DR. REICHERT: Okay. I just wanted to make sure that we captured what you just mentioned. Alexei, go ahead. Sorry to interrupt you.

DR. SHAROV: I was looking at the next one, the requirement to list the -- Sorry, and the screen is jumping. The factors that are contributing to overall uncertainty and comment on the effects of the assessment factors. I mean, we say, in general, due to data limitation, no estimate of stock status, or OFL, and I don't know if -- This might be sufficient to everybody, but you may want to comment on what data limitations are there.

I mean, essentially, we're -- I mean, we're looking at anything that could give us a glimpse of the stock status. I mean, it's either CPUE or reliable size frequency, or reliable age frequency, right, and, I mean, there has to be something that we could use to judge at least on the -- To make conclusions about trends, either in the indices of abundance or the average size, or the average age, et cetera, and it just seems to be that it's poor in all directions, and that's where --

DR. REICHERT: Thank you for that, and, Judd, maybe index information? Thanks. Anything else here? Thank you. Let's go down to apply -- Sorry, go ahead. Mike.

DR. SCHMIDTKE: Hi, Marcel. I just wanted to clarify one of the things I had heard earlier about a single ABC being applied, and so there is a single ABC applied for the entire South Atlantic region, and so that is the south of Hatteras model and the sliver, and then there is a separate ABC that is applied in the Mid-Atlantic region, and so I just wanted to make sure that that is clarified as we move forward.

DR. REICHERT: Absolutely. Thanks, Mike, for that clarification. Yes. When I mentioned one ABC, I meant that, ultimately, the sliver and the southern part will be combined as one ABC, and so thanks for that clarification. I appreciate that. Okay.

Apply the South Atlantic ABC control rule. I made a point that, obviously we had some difficulties applying the ABC control rule, and -- The joint subgroup, and we basically applied an ad hoc method, which I believe is Tier 4, to recommend an ABC. We, the subgroup, recommended an ad hoc method, and then I would say, between brackets, that's the Tier 4, right, in our ABC control rule, or the equivalent of a Tier 4.

DR. CURTIS: Yes, and that's correct.

DR. REICHERT: Okay, and we did that given the available data, and it -- I'm not sure where we put that, but this may be the point where we may want to say exactly what we are recommending, or, if the South Atlantic SCC is taking over the recommendations of the subgroup, which the Mid-Atlantic SSC did, it is the 50 percent percentile of the average catch as an estimate of ABC, and I -- Again, over lunch, I can provide that text to you. I think I actually provided that to you earlier.

DR. CURTIS: Sorry, Marcel, and can you say that again? I was wordsmithing.

DR. REICHERT: Applying -- Alexei, go ahead.

DR. SHAROV: I just wanted to clarify what you -- What was the recommendation? The 50th percentile? Essentially, it was -- I mean, in simple words, recommend the average catch from the three bootstrapped curves of the catch distribution, and is that what they recommended?

DR. REICHERT: Yes, the CC1.

DR. SHAROV: The CC1.

DR. REICHERT: The 50th percentile, and, Judd, I just emailed you the text that you can possibly drop in here, and it also included the sliver, and it added the numbers.

DR. SHAROV: If I could, if I still have the microphone.

DR. REICHERT: Yes, and go ahead.

DR. SHAROV: I don't see, anywhere down here, the issue of the additional buffers on uncertainty. I think that was mentioned earlier that, there was -- I guess the group recommended the additional buffer, and I disagree with that. I think that we could recommend the ABC as we just described, essentially, as the average catch.

I didn't see any evidence, from the average mean length analysis, of the effect of the fishery. That is that -- You know, I talked about it earlier, that there doesn't seem to be a clear signal of the reduction in length as a result of the fishing activity. The information, from the fishers, is that they don't see the decline in the average size, or they see the wide range of sizes, and presumably ages, and they don't see a decline in CPUE.

All this collectively suggests that the effect of the fishing is very moderate, or possibly low, or maybe even very low. For that reason, this range of catches seems to be safe, or appropriate, and I don't know how to better characterize it, but given the extent of what we know, and, therefore, there is no need for an additional buffer, because the uncertainty with the MRIP -- Yes, we are not accounting for the uncertainty of the annual estimate of the recreational catch, but --

If we were able to account for it, that is incorporate it into the bootstrapping, well, we would have gotten just the curves with the, you know, wider spread, but then we would be using, in the upcoming years, estimates of the recreational catch, which I would -- You know, I would expect to have about the same level of uncertainty, because of the methodology that they used and the nature of the data, and so that would -- That already would include that very same uncertainty that we're not accounting for, and so that additional buffer, I think, would be unnecessary. Thank you, and that's --

DR. REICHERT: Okay.

DR. SHAROV: I didn't hear optimism in your voice, Marcel.

DR. REICHERT: No, and I agree. I'm just thinking about what we put in the report, in the joint report, where we did, I believe, suggest that the council may consider, you know, a level of management uncertainty, you know, given the overall uncertainties of the assessment, but I agree,

and I think, in the report, it specifically says, you know, the age structure doesn't -- As you mentioned, the age structure doesn't give any real concerns, nor some of the information from the industry, and so I -- In that respect, I agree with you.

Again, we can refer to the report, and so is this -- You know, you mentioned that you don't see the need for an additional buffer, but I assume that you are mentioning the -- You are referring to the scientific buffer, correct? In other words, that last sentence -- Does that last sentence give you heartburn?

DR. SHAROV: Well, no, and, I mean, the council is always -- I mean, they always have the freedom to consider additional management risks.

DR. REICHERT: Okay, and, Judd, and, Mike, I see your hand up, but maybe from "given" to the last -- Remove the underlining, because I think the underlining -- I added the underlining just to highlight our ABC recommendation. Mike, go ahead. Sorry to make you wait.

DR. SCHMIDTKE: No problem, and I actually was going to -- I'm still trying to formulate the question, but I think I was thinking in somewhat of a similar mindset as Alexei. I guess I was wondering about the application of an average catch method as it comes -- As it is applied in terms of an annual limit on catch.

Most of the time, when I'm familiar with average catch methods being applied, there isn't really a limitation on catch. Either it's not been restricted by the annual limit, because it's not approaching it, or there's no limit in place, and so the average catch is kind of seeing how the fishery has played out somewhat naturally.

In this case, it's a little bit different, because we are looking at a fishery where there is an annual limit that has been in place for several years now, and it's been hit by the fishery, and so that potentially affects the removals, and what you're going to have as an average catch coming out of your model, and so I guess I was curious if the SSC would provide some commentary on how applying an average catch method in this type of situation can be used by the council in its mandate to optimize --

DR. REICHERT: Your last -- I didn't hear your last sentence, and so can you repeat that last part of your -- Sorry, and your audio dropped off on my computer.

DR. SCHMIDTKE: Sorry about that. So, in terms of the council's charge to optimize yield of a fishery, it seems like we have a fishery, in the northern region, north of Hatteras, that is -- Especially in the mid-Atlantic, it's growing, and it's somewhat emergent, within a pretty recent timeframe, and the council has a charge to optimize yield, but also, you know, be within acceptable biological catch limits that are put in place via the SSC.

I guess some commentary about applying an average catch on a fishery that already has limits in place, where your average catch that you're seeing is not something that's like organically playing out. It is impacted by the limits that already exist and how that can potentially have, you know, kind of the compounding effect, where you set a limit, and you take the average from the fishery coming out of that limited regime, and then the limit is going to inevitably go down, if they're adhering to that limit, and so I'm kind of having some commentary along those ends.

DR. REICHERT: Thank you. That's a good point, and I would love to hear from the committee about that point. All I can say is -- Yes, and I'm trying to wrap my head around this. There's not a lot to go with, in terms of alternatives, but, again, I would love to hear from other SSC members. Please speak up. Fred Serchuck, go ahead.

DR. SERCHUK: Thank you, Chairman. I'm finding this paragraph very difficult to understand, from a management point of view. We're recommending an ABC, and then we say, given the uncertainties, no additional buffers is considered for scientific uncertainty, but now we're saying the council should consider a buffer for management risk, and, you know, if there's no -- If we have no concerns, in terms of the scientific aspects, what do we expect managers to do? Do you follow me?

DR. REICHERT: Yes, and do you have a suggestion for text here?

DR. SERCHUK: Well, I think we need to discuss it, because it looks like it's contrary to -- We're saying we recommend an ABC, and we say that, given the uncertainties in the method, no additional buffer is needed for scientific uncertainty. To me, that says, well, okay, the scientists say this is appropriate. Okay, and then this might be the ABC to use, but now we're saying a buffer, and I'm not really quite sure whether it's going to be interpreted in a very understandable fashion. That's all, and thank you.

DR. REICHERT: Well, yes, and maybe we are talking about given the uncertainty, perhaps the council may consider a buffer for management risk, but, you know, I think Mike mentioned that the council can always do that, and so maybe that's a sentence that's not necessary, because that is something that council can -- That's the purview of the council. Does that answer --

DR. SERCHUK: That would be fine with me, if we could eliminate that. Thank you.

DR. REICHERT: Okay. Going back to Mike's comment, again, I would love to hear from the committee with some thoughts relative to what Mike mentioned. Wally, go ahead.

DR. BUBLEY: Marcel, you made kind of the same comment I was thinking about with this, is we don't have any other data to look at this, because it's -- The only data that we're utilizing is under this management regime, and I think the thought is that we'll have more available data in the near future that other -- That it can be based off of, but, as of right now, it's not there. I think this is the conservative approach to take, to move forward, and, again, I don't see what else we can utilize for this.

DR. REICHERT: Thanks, Wally. Steve, to that point.

DR. TURNER: Yes, and I'm thinking about what Mike just said, and thinking about what Alexei has said, and, you know, it seems to me that we have a developing fishery here, and is there some need to throttle this fishery?

Are there any indications that the fishery, as it's currently, you know, exploiting the resource, is damaging the resource, and I'm not sure there are indications, and so I'm not sure how you proceed in that situation. You know, if you look at the last few years of landings, they're higher than any

of the years, and we're not seeing indications of depletion, and so I'm not sure where we should be, in terms of managing this resource. Thank you.

DR. REICHERT: Thanks, Steve. Of course, the concern is always at what point are you seeing indications in the population for a fishing pressure that may be too high, and, right now, we haven't seen that yet, based on the data, and based on some of the comments we heard.

DR. CURTIS: Marcel, if I may, that was a concern raised at the Mid-Atlantic, is we don't really have an idea of what the biomass levels realistically are, and one of the solutions they adopted was then to just look at this ABC on a one-year basis and gather any additional information that may be available within the next year before -- However long it takes the new ABC to be accepted to, you know, groundtruth, or as a health check, to make sure that these ABC recommendations would be sustainable moving forward.

DR. REICHERT: Yes, and I actually was going to mention that in one of the action items below where that comes to play, and so let's add that there. Steve, to that point.

DR. TURNER: Yes, and so you indicated that the recommended ABC is above the previous recommendation, and is that correct?

DR. REICHERT: I believe so.

DR. TURNER: You know, if we have a substantial increase, then that may be reflecting the sort of the developing nature of the fishery, and maybe a sort of conservative way, if the fishery continues to increase and increase -- You know, maybe that's a sort of conservative way to, you know, kind of allow additional catches gradually, to see what the fishery can sustain, but, anyway, I'll sign off at this point.

DR. REICHERT: Thanks, Steve. Chip, go ahead.

DR. COLLIER: Yes, and I just wanted to point out that the commercial fishery has been closing, based on their ACL, recently, and the council recently had action to shorten the recreational season, because that part, or that sector, was exceeding their ACL, and so there were some issues with the ACL, but the council has taken management measures to restrict some of the catch.

DR. REICHERT: Chip, remind the committee, and that commercial ACL was met also?

DR. COLLIER: Yes. They were meeting the ACL, and so the season was closing.

DR. REICHERT: Okay. Thanks. Let's move to the next action items. Judd, where were we? We moved back and forth a little bit. Difficulties applying the ABC control rule, and, also, under that point above, I think it would be -- I'm not sure where we put that, but the apportionment between north and south of the North Carolina-Virginia border, and we may want to add that to that somewhere. I don't think there's room for that anywhere and maybe here, under apply the South Atlantic ABC control rule.

DR. CURTIS: Yes, and I put that up here, under some of the risks and consequences of the assessment of certainties, and that can include any apportionment.

DR. REICHERT: Okay. Sounds good, and I like the way you proposed that in the last report. At the end, just have a couple of lines that summarizes the decisions, and I think we should add that there at the end. The SSC recommends, and then add the ABC methods, including the number of pounds, and then how it's divvied up, but we can add that later. Okay. Thank you.

Let's go down to the comments on -- Can you go up just a little bit? Here, under comments on the difficulties, I would add that the procedure for setting ABCs in Tiers 2 to 4, and, in this case it was 4, is not fleshed out, and there is an urgent need for discussion and developing approaches, to avoid possible inconsistent ad hoc decisions. The procedure for setting ABCs in Tiers 2, or categories, and I'm not sure what they're called, but 2 to 4, are not fleshed out, or are not fully developed, and there is an urgent need, or there's a need, for discussion and developing approaches, to avoid possible inconsistent ad hoc decisions. Thanks. Alexei, go ahead.

DR. SHAROV: Yes, and you were asking, a couple of minutes ago, about the comments regarding Mike's question, and what do we think about setting the limit, as an average catch, on the catches that were already defined by the limits, right, and, I mean, that this was not a sort of a completely sort of free go and fish, and then we record the total annual removals, and then we get the average.

It seems, to me, the consensus is that we sort of agree that there is no indication of negative effects of the current level of the fishing, where we have no direct measure of the level of exploitation, but we're agreeing that the observed catches that were obtained from the stock over the course of five years do not seem to make harm, and that's why we go with it, even though they were already sort of -- Those catches were realized under the existing limits, but that's what we have.

That's what we've recorded as removals, and then, based on this removal, we compared them with the size structure, et cetera, and other qualitative and quantitative information, and we've concluded that there is no negative effect, and that, for that reason, we say that the catch levels are acceptable as they stand, because of data limitation, and so that would be my answer to Mike's comment, which was a good one.

DR. REICHERT: Judd is trying to capture that, and, again, please provide some text once we send the report out. Thank you. All right. Okay, and let's go down to the action items that we were discussing. We were here, to the advise on monitoring the stock until the next assessment. The only thing I added to that is, and it may have been kind of inherent in that list, is the SADL survey data, under Other. That's not in the -- Chip, go ahead.

DR. COLLIER: I think the recreational landings should just be in FES.

DR. REICHERT: FES? Okay. Thank you. Jim, go ahead.

MR. GARTLAND: I think, given the heartburn that it’s causing us, we should be looking as the SADL survey data as they’re coming in, and what that split is looking like too, between the Mid-Atlantic and the sliver, just to see how consistent or not that is.

DR. REICHERT: Yes, and that goes under the next point, to provide guidance on the next assessment. Jim mentioned the use of the SADL survey, and re-evaluate the split.

MR. GARTLAND: Yes, but I think that's something we can do kind of as an ongoing, and like not wait till the next assessment, but as the data are coming in, and it doesn't seem like that complicated of an analysis, and just run it again and see -- You know, to Dewey's point, I mean, is it swinging a lot, or is it consistent? You know, that's a pretty easy one to do, and that can be, you know, five minutes before you go home for the day or something.

DR. REICHERT: Yes, and re-evaluate the apportion method based on additional years of survey data, and, you know, it would be good to indicate there that that does not have to wait until the next assessment, and so that evaluation can be done kind of on an annual basis.

MR. GARTLAND: Yes, and that's exactly what I was going for.

DR. REICHERT: Yes, on an annual basis. Also, I had a note that said to investigate if age data can be reliably used in the next assessment. There's a lot of -- There was a lot of discussion about age data, and I'm not sure what -- But it would definitely improve the next assessment, and then, in terms of the next assessment, and that goes back to what Fred said earlier, the next -- I wrote down that the next assessment should be done as soon as possible when reliable SADL data index are available and can be reliably incorporated in the assessment.

Then there's -- I think there's some recommendations in the SSC's SADL review report to the next assessment, and then I had here -- Sorry, and go ahead. Sorry if I'm getting ahead of you, Judd. Just stop me. Then also I had -- That goes back to that I think including reliable age data could further improve that assessment, but that's also above.

A question for the committee is I think it would be really useful for the council, and for the SEDAR Steering Committee, if the SSC could actually say -- To give a year within when -- When would the SSC recommend the next assessment, and so I'm opening the floor for suggestions or recommendations.

If I remember correctly, five years, which was the minimum recommended by the SSC for index data to be included, that should happen in the next year or two. However, the extent -- The expansion north, there is some uncertainty there. This year is the third year, and so that would take another two years, and so, Jim, to that point. Go ahead.

MR. GARTLAND: Exactly. Just doing the math in my head, it sounds like 2028. If the assessment were started in 2028, there would be five years of data available for the full survey, and so Delaware Bay down into the Keys. It would seem like 28 would be the first year we could try it.

DR. REICHERT: That's the northern expansion, right, because the other -- We have more years of data for the southern part, correct? Wally, help me out here.

DR. BUBLEY: Yes. Correct. This upcoming year would be year-five for the southern portion. I will state that we're not overly optimistic about having funding for the Mid-Atlantic for the next couple of years after this year, and so it's nothing -- Okay, so the 2028 may be -- 2028 may not happen.

DR. BUBLEY: Yes, and, I mean, 2028 would be if we could secure funding for the Mid-Atlantic for the following two years after this, and then, yes, that would be correct, based on what Jim was saying.

DR. REICHERT: I have Steve, and then Jim. Steve, go ahead.

DR. TURNER: Yes, and 2028 may be the year when the data is -- You have five years of data, and so then you have to go at least to 2029, if I'm correct that 2028 is the year when you get the fifth year of SADL data.

DR. REICHERT: Yes, so it may be good to specify that 2028 would then be the terminal year of the --

DR. TURNER: Right.

DR. REICHERT: Okay. That is -- That means --

DR. BUBLEY: Can I jump in on that comment? Sorry, Marcel, and 2027 would actually be the last year. I just wanted to make it correct, because 2023 was the first year that the expansion happened, and 2023, 2024, 2025, 2026, 2027.

DR. REICHERT: So 2028, with a terminal year of 2027, would be realistic?

DR. BUBLEY: Correct.

DR. REICHERT: Okay. Thank you. Steve.

DR. TURNER: I'm done.

DR. REICHERT: Okay. Jim, go ahead.

MR. GARTLAND: The reason I had said 2028 is I was thinking five years north of Hatteras. Again assuming the funding are available, just because, if we went five years from the beginning of the survey, from what I could see in those plots, it looks like the bulk of the blueline catch is coming north of Hatteras anyway, and so it seemed like your best dataset -- You know, you would have five years north of Hatteras, and seven years overall. You could probably do something with that.

DR. REICHERT: Okay. Thanks. I would like to add a comment here, that is similar, to indicate that the Mid-Atlantic SSC has recommended looking, or re-evaluating, that next -- They only recommended a one-year ABC, and they recommended looking at that in a year's time. Now, the procedure in the Mid-Atlantic is a little bit different than ours, but, if we recommend a stock assessment in 2028, then, realistically, management will not be in place until 2029. That's four years from now, and, given the uncertainty, what does the committee feel for that timeframe?

Should we recommend maybe looking at this before that and, you know, recommending to bring it back to the SSC, to see if there's a need for revising our ABC recommendations? I would like

to hear from people, especially those that I haven't heard from a lot yet. What's the pleasure of the group here? I think it would be extremely useful for the council to hear from us relative to that.

DR. CURTIS: One thing I'll add, Marcel, is that, in the section above, the advice on monitoring the stock until the next assessment, and so that would include some of -- All this information that is bulleted here, and that would be looked at in the interim, before any other assessment would be conducted, and, you know, if there are some flags that emerge, based on some of the trends in these data sources, that could be something we bring back to the SSC to consider in a re-evaluation of the ABCs, if they are comfortable setting ABC for multiple years, or if they want to set it just for the single year, similar to what the Mid-Atlantic SSC approach was. We'll be monitoring the stock throughout this process, no matter what.

DR. REICHERT: Yes, and thanks for that, Judd. I really -- I would like to see that reflected in our report a little more specifically, not just monitoring until the next assessment, but, you know, if there are indications for concern, that we should re-evaluate our ABC recommendations, and I realize that that will be very complex, because that means that we need to include the Mid-Atlantic, but the same is true for the Mid-Atlantic, because, if they are setting an ABC for one year, and then considering to adjust that, then, obviously, the South Atlantic needs to be included in that, because what's happening, in effect, now is that we have one ABC number, one ABC, that is going to be in place -- The same number is going to be in place until our next ABC recommendation. Jim, go ahead.

MR. GARTLAND: Marcel, you were kind of hitting on exactly what I was about to say, which is if the Mid is doing this in a year, we're kind of linked at the hip, right, and so is it something that we should be prepared -- I mean, regardless of what we want to do, be prepared to re-evaluate in a year, because if the Mid zigs, we're going to have to zag, right?

DR. REICHERT: Yes, or we have to zig too.

MR. GARTLAND: Either way.

DR. REICHERT: Anne, I saw your hand up. Go ahead.

MS. MARKWITH: I guess my comment is similar to Jim's, but I'm also trying to reconcile something in my head, when it comes to the research recommendation that we made about re-evaluating SADL right there at north of Hatteras. If we're going to say we're going to re-evaluate that on an annual basis, in so much as we have the funding to do that survey, how does that affect those ABC recommendations, because that is part of it, or is it just, okay, well, we think this needs to be changed, based on the new data, and like not change the ABC, but change the proportion.

DR. REICHERT: Yes, I think that depends on what the -- If there is a big shift -- If the result of next year, if there's a big shift in that, that may be that our -- Some of the assumptions that we are using to come up with a split may not be justified, and that means that we may want to reconsider that, and, of course, that has consequences for both the Mid-Atlantic and the South Atlantic, but that's the way I interpreted that, is let's take a look and see if there's huge shifts, and, if it is, then let's discuss how we are going to approach that.

MS. MARKWITH: So I guess then my question is if --

DR. REICHERT: Go ahead.

MS. MARKWITH: Would it just benefit us then to mirror the Mid-Atlantic, if we're going to relook at that anyway, and just say, instead one year -- Like I realized that's kind of out of -- It's different for us at the South Atlantic, but maybe it is beneficial to mirror the Mid-Atlantic then, if we want to reevaluate that anyway, not knowing what it's going to show.

DR. REICHERT: Jim, I saw your hand up, but I think that's actually a good idea, and perhaps we should add here that it would be beneficial to coordinate any reevaluations with the Mid-Atlantic, because that recognizes the fact that, as Jim said, we are joined at the hip. I'm not sure if it's a similar approach, but what I would say is that the South Atlantic SSC recommends coordinating any reevaluations with the Mid-Atlantic because decisions made in either region are impacting the other region. Does that make sense? Jim, I'll come back to you.

MR. GARTLAND: Are you all good? I don't want to cut you off, man.

DR. REICHERT: Well, and, Judd, it's -- It's not just the apportioning methodology, I think, and correct me if I'm wrong, that the Mid-Atlantic SSC is going to look at, right? If they're setting an ABC for one year, then I assume they're looking at both the ABC and the apportioning.

DR. CURTIS: Not entirely correct, Marcel, and so the ABC, because it's based on that DLM method, that would be a static target, right? They're not going to be able to recommend anything higher than that ABC ceiling, nor would the South Atlantic be able to recommend anything higher.

DR. REICHERT: Okay.

DR. CURTIS: The one thing that would be somewhat fluid is that apportionment methodology, once you integrate additional years of data from the SADL, or from alternative sources, and that would then change the proportion of the ABC for each of those regions, but you're not going to go above the recommended ABC of 646,000 pounds for both regions.

DR. REICHERT: Okay, and so that the re-evaluation by the Mid-Atlantic is purely about the apportioning, and not about the ABC, per se. Okay. Thanks.

DR. CURTIS: It's purely about the apportionment methodology, but, also, if there are -- I see Brandon jumping in here, and so, Brandon, please pick up where I left off, but, in addition to the apportionment methodologies, if there's a reason, or a scientific rationale, to apply some buffer that was not utilized this time around in setting the ABCs, in the interest of additional scientific uncertainty, they may revisit that, but that determination would affect just the Mid-Atlantic's portion of the total ABC that we're looking at here. Then the South Atlantic would have, within their purview -- You know, if they decided they wanted to apply a scientific buffer for uncertainty, based on the new data, then they would be able to do that for the sliver region for future -- Based on future analyses.

DR. REICHERT: Jim, I see your hand is still up, but, Brandon and Mike, to that point. Brandon, go ahead. Thanks for joining us today, Brandon.

MR. MUFFLEY: Thanks, Marcel, and thanks for letting me talk. Judd captured -- Where he was going at the end there, it captured what I was going to say, that our SSC is going to reevaluate what the ABC may be for that, for the Mid-Atlantic portion, and Judd is absolutely right that the 646,000 is the number for the overall ABC, but I certainly think that our SSC is going to look at both of those issues, and do they want to apply some additional scientific uncertainty, that they did not apply this go-around, given additional information that they may look at next year, and so do they want to go down from that 646,000 to apply to the Mid-Atlantic region, and also review the apportionment methods and see how things change given the 2025 data, and so I think Judd captured it right, and so thanks, and I agree that we will definitely need to continue to coordinate with you all on all of these things as we move forward.

DR. REICHERT: Thanks, Brandon. I appreciate that. Mike.

DR. SCHMIDTKE: Yes, and I think where you all are ending on the bullet -- I think that kind of captures it well. I was just thinking to point out that any change to the apportionment methodology --I think, Marcel, you had alluded to this, and it would change the ABC within a region, or the overall ABC for north of Hatteras, and this is where we get real confusing, when we have the sliver cutout of the South Atlantic region, but any change to the apportionment methodology would change the South Atlantic ABC, and would affect the Mid-Atlantic ABC, but it would not change the overall number that is representative of the north of Hatteras ABC.

DR. REICHERT: Okay. Thanks. I appreciate that. Jim, go ahead.

MR. GARTLAND: Just briefly, and this gets to the idea of, you know, how we're linked together. If the Mid is going to review, and potentially to consider changes for next year, I think a joint meeting, much like we had for the yellowtail and mutton snapper in Tampa, is probably a good idea.

That seemed to work well between us and the Gulf, and I think something similar between us and the Mid would work. We can kind of get all the issues knocked out at one shot, with everybody at the table. I know we kind of did that with the review, but you and I talked about this, Marcel, that there probably should have been more of us at the table, on both sides, and so maybe we just make it a larger joint meeting, if this were to occur.

DR. REICHERT: Yes, and thank you. I completely agree with you. All right, and so I think that is the end of our action items. Any last -- Before we break for lunch, any last comments, or hands up? I appreciate everyone's input. I thank the presenters for their hard work, and their presentations. I recommend an hour for lunch, and so let's come back here at 1:20. Is that okay for everyone? Does anyone disagree with that? Hearing no complaints --

DR. CURTIS: No hands were raised.

DR. REICHERT: Sorry. What? Go ahead.

DR. CURTIS: No hands were raised.

DR. REICHERT: Okay, good. We'll come back at 1:20, and we'll continue with the southern part. I hope that can go a little quicker, because we discussed a lot of the issues here already, and then

we also have black sea bass and a couple of other items to complete before we break at five, and so enjoy your lunch, and we'll see everyone back at 1:20.

(Whereupon, a recess was taken.)

DR. REICHERT: Okay. I have 1:20. We're missing a few SSC members, and so let's resume the SSC meeting. Judd reminded me, before we go to the next agenda item, that it's good for us to specifically approve the recommended apportioning of 30-700 percent, as recommended by the subgroup, and so I would like to know if anyone disagrees with that recommendation.

Otherwise, we'll add to the report that the South Atlantic SSC recommends that 70-30 split, based on the methodology that's laid out in the report, and that was presented by Paul earlier today. Anyone disagree? Seeing no hands, so that's a recommendation from the South Atlantic SSC to the council, and we will reflect that in our report. Judd, anything else that I skipped over this morning before we move to the next agenda item?

DR. CURTIS: No, and that's it, Marcel. Thank you, and I just wanted to make sure that got on the record as the SSC recommendation, and I took the language you drafted, and I just added the end result the calculation of the ABC for that sliver region, the Cape Hatteras to the North Carolina-Virginia border, would be, and that is 193,800 pounds whole weight, which is 30 percent of the 646,000 pounds.

DR. REICHERT: So, in terms of the model, under OFL, we say not available, and then, ABC recommendations, that would be that number for -- There you go. Okay. Thank you. One question I have for the SSC is are we providing this ABC for 2026, 2027, and 2028, or following the Mid-Atlantic SSC by providing an ABC for one year? I recommend doing that for the 2026, 2027, and 2028. I f anyone disagrees with that, please raise your hand. Seeing none, so that will be -- Chip, go ahead.

DR. COLLIER: As opposed to not recommend an ABC, maybe just say recommend the value from for 2026 onward as 193,800. That way, we're not having an issue where an ABC is not defined. This will continue it until it gets changed.

DR. REICHERT: So you say, procedurally, providing an ABC for 2026 is sufficient, because that will then continue until the next ABC recommendation, correct?

DR. COLLIER: Yes, and providing it -- Yes, and just say the 193,800 until any change is made.

DR. REICHERT: Okay.

DR. COLLIER: That looks good.

DR. REICHERT: All right. Thank you. All right. Next, Agenda Item 4, we continue with blueline Tilefish, but then the southern region. I hope we can deal with this a little quicker, because a lot of the issues are similar, and we still have a number of other agenda items to go through before the end of our meeting, and so Attachment 4a, b, and c, and Nikolai is going to present the southern region model. Judd, do you have some introductory remarks before we hand it over to Nikolai?

DR. CURTIS: No, and I think it's captured in the overview well, and, as you already alluded to, a lot of similarities with this model and the uncertainties therein, as we just reviewed with the northern model version, and so keep that in mind, and we don't need to rehash all those discussions, and we can lift text from above, as needed, for this segment as well, because you'll see there are -- We do need to go through all the action items similarly, because it is a different model, but, you know, we are welcome to -- The SSC is welcome to, you know, use the same language as above, if those uncertainties are the same.

DR. REICHERT: Okay. Sounds good, and this -- As a reminder to the SSC, this is a result of our discussions we had at our April SSC meeting, and Nikolai was able and willing, or the Southeast Fisheries Science Center was able and willing, to look at the DLM, as a result of that, and so I would say, Nikolai, take it away.

DR. KLIBANSKY: Okay. Do you see a presentation?

DR. REICHERT: Yes, we do.

DR. KLIBANSKY: Okay, and so this presentation, you know, uses the same template as the presentation I gave before, and so some things I'll go through kind of quickly, and then other things I'll try to point out for some emphasis, but so, here, we're going to be looking at data-limited methods applied to blueline tilefish south of Cape Hatteras.

A very similar structure, except I won't go through the background on SEDAR 50 in the introduction. In the introduction, I'll just sort of kind of talk about where -- How we got to -- How we got here from the last time we met, and so the age-aggregated surplus production model, or AAPM, which has currently been used to provide management advice for blueline south of Cape Hatteras, was also run for SEDAR 92, for the operational assessment, and was presented to this SSC on April 15th of this year.

As a follow-up to that meeting, and I'll just read it verbatim. An April 22, 2025 memo sent to the SEFSC by the South Atlantic Fishery Management Council, on behalf of the South Atlantic SSC, requested that a DLM model, similar to the approach applied for the area north of Cape Hatteras, be completed, and so a DLM analysis was completed, following that approach, and was documented in an addendum to the SEDAR 92 report submitted to South Atlantic staff just last week, on May 23rd.

I'll go through what we did there, and I, you know, at a bunch of points during this assessment process, have really tried to stay on script, as much as possible, given this being an operational assessment, and not to, you know, avoid being extra creative, but just being mindful of the fact that, even in a full age-structured stock assessment, small changes can sometimes have big consequences, and so I think that that tendency is even stronger for simple approaches. You know, I really have just applied the same approaches that we applied north of Hatteras for the area south of Hatteras, and, in many cases, the data are actually the same, and so I'll go through these.

You know, one set of information that is unique to the area south of Cape Hatteras is -- This is the longline length data for south of Cape Hatteras from the longline fleet. It's maybe worth pointing out that these weren't specifically provided for use in the assessment. We weren't expecting to use

them for the assessment, but data providers had provided both. You know, in providing the lengths, had provided them coast-wide, and so that was pretty convenient, in the past few weeks, that I already had the data and was able to, you know, modify it for inputs for the DLM analysis.

They are limited to the period that I limited the catch inputs to, which I'll show you in just a minute, and the catch is limited to 1987 to 2023. This is 1990 to 2023, just because there was actually no length data from 1987 to 1989, and so this is a very similar plot to what you saw before, and, again, these are numbers of fish, at the top, and I have a second plot in here showing frequency, you know, frequency distributions by year. It goes down the columns from top-left to bottom-right, and so 1990, 1991, 1992, and so on.

Here are -- This is the same data I plotted in the previous slide, thinking that you might want to look more into -- You know, see if you identify any patterns in length distributions. The N1 is the number of trips, and N2 is number of fish, and I didn't filter anything out. You'll note that there's a lot of years where the number of trips is very small, and pretty variable, and I would say maybe half of the years or so are fewer than ten trips, and so they kind of bounce around a fair amount.

One thing that's notable, in contrast to the size frequency distributions north of Hatteras, is that these tended to be unimodal, whereas, in the distribution that I showed north of Hatteras, there's this sort of larger size mode that we see, and that's not present really in, you know, almost any year south of Hatteras. I'll show the composite distribution of those in a few slides.

Regarding the catch time series, you know, it was developed similarly to -- It was just developed, you know, in the same effort, of course, as the development of catch time series for north of Hatteras, and it's the same catch time series that went into the ASPIC model runs, and so that was already available. Here, you know, there's -- This is kind of a, I guess, a modeling or data input decision. It was necessary to determine what years to use, and so I limited the catch input for these DLM approaches to a pretty long period following these two early periods.

I think of them as these early periods, where, you know, we have this, you know, from the 1950s, like late 1950s to early 1980s, a really limited and developing fishery. We had this period of years, and what is it, seven years, where you have this big pulse of removals, and this is almost all commercial removals in Florida in that period, and then this long period, that has, obviously, had some ups and downs, but it's generally -- You know, you could probably draw a horizontal line through it, and it’s fairly stable over time.

As I noted before, the catch time series is being used in these approaches, either as an average catch or a recent average catch, or, in those mean length methods, it's only the absolute last value in the catch time series that's being used. There are several slides here, which I'll go through very quickly.

The natural mortality estimates are the same as in the model north of Hatteras, and the same with the maturity input, and then this is the composite distribution of length frequencies. What I showed before the annual length frequencies, and so, here, actually, it's interesting. When we estimate this LC value, I think it was one millimeter off from the estimate for north of Hatteras, but this Lbar estimate is a fair bit lower, and so, you know, overall, you know, all of the life history information that's going in here is basically the same as north of Hatteras, and it's worth noting that those values were developed based on datasets for fish that were north and south of Hatteras, and so, you know,

in that sense, it makes sense to use the same ones. This is sort of the most distinctly different value, other than the catch values.

The growth model parameters are the same. The length weight parameters are the same. Steepness, you know, it was based on meta-analysis, and, the max age, same thing. It's the same, and so we have these same approaches of the average catch, recent average catch, and then the scaled recent average catch, and this is the same demographic mean length method, and then the YPR-based mean length method. These descriptions are a little more detailed in this presentation, but, otherwise. the slides are the same.

Here are the results of all those methods, and, you know, in this case, you know, we see the same kind of pattern among the catch-based methods, where they're pretty close together. In fact, in this case, the average catch and the recent average catch are quite similar, and, of course the CC4 is, you know, about 70 percent of that orange distribution.

In this case, the mean length methods are still very uncertain, and their medians are still high, but they weren't off the charts, like they were in the north. This is plotted -- It's the same plot, but just to emphasize that uncertainty. This is the exact same data as plotted in the previous slide, but just with a wider X-axis range, and so, you know, it gives you a sense of how long the tails are for those distributions for the mean length methods, and it's probably a little hard to tell, you know, just from looking at the distributions, but the medians are, you know, not at the modes, and so these vertical dashed lines are the medians for those distributions, and I think they would have been outside of that plot range for the previous plot.

This is the table like I presented in the previous presentation, where you can see the medians among the average catch methods, the catch-based methods, are still quite a bit lower than these mean length methods, but, at least in this case, the medians of the mean length methods were within the range of observed historical catches, but you can see, by looking at these different rows or different quantiles of each of those distributions -- You can hopefully get a sense, and, from looking at the actual distribution plots, how broad those distributions are.

In this table, I actually also added, and in the report addendum too, I added the standard errors for the different -- For each distribution, for comparison with the ASPIC model outputs, because that's something that we report in the main report associated with the MSYs that come out of the bootstrapping from ASPIC, and so the standard errors are, you know, quite large, especially relative to the medians of those distributions.

I had a slide in the previous presentation explaining why the mean length methods didn't work north of Hatteras, and, you know, I was sort of on the fence about how to interpret these results, because, in this case, the internal estimates of F current were plausible. We didn't have -- You could get some negative Fs, because, you know, there's bootstrapping of all the inputs, but, you know, it was -- The sort of base run was positive, and so a lot of the Fs in the distribution from all of the different bootstrap runs were also positive, and so, you know, I guess that would be open for discussion, how you want to interpret these.

My sense was that the results are still high, but not, you know -- You know, but plausible, but the uncertainty in the results is really huge, and, overall, it's kind of -- We talked about before that the

mean length methods are really sensitive to the Lbar value, which is the main thing that differed between the analysis north and south of Hatteras for the mean length methods.

I thought for, you know, the sake of kind of discussion, and for you all trying to decide what to do to provide catch advice for the stock, it would be worth plotting the distributions of the MSY values from the age aggregated production model, the ASPIC runs, along with these distributions of TACs from the data-limited methods, because that's sort of the -- You know, these approaches, of course, don't provide a lot of output that could be compared with a surplus production model.

The ASPIC, obviously, provides a lot more output, but we have those distributions of MSY, and I know that was sort of a point of contention when reviewing the ASPIC models, but this is what the distributions would look like plotted on top of these data-limited methods, where basically, you know, the median values -- Let me explain, if you can't see this, but the light gray line is the distribution of MSY for the longline-only model.

The darker gray solid line here is the distribution from the handline-only model, and then this dashed line, which is, of course, bimodal is the combination of those, and that's the, you know, updated model run, based on what was done in SEDAR 50, and so, at any rate, you know, they're kind of between -- The median values of those MSY distributions from ASPIC are kind of in between the medians from the ML methods and the catch-only methods.

Just a few conclusions, and the simple catch-based approaches produce TACs in the range of recent catches, as you would expect, and they're lower than the MSY estimates from any of the ASPIC runs actually, and that goes for this assessment or the, you know, SEDAR 50. The median TACs from the ML methods were at least within the range of historical removals, but they were higher than any MSY from the age aggregated production model, and were, in my, you know, adjective, extremely uncertain, and so the data-limited approaches -- You know, they're less sophisticated than the ASPIC model, and they generally produce more uncertain catch advice.

Again, just trying to think of like how do you compare these different approaches, you know, in contrast to the age aggregated production model, the data-limited methods that we're using here are not incorporating time series trends, and they're not fitting any datasets, and they're not producing any accessible parameter estimates, aside from the TACs, and even, you know, the F estimates that I pulled out are sort of hard to get to, or any estimates of population trends or status. I'll leave it at the same peaceful view of the garden, and take any questions, and thank you.

DR. REICHERT: Thanks, Nikolai. I really appreciate you running these analyses, as requested by the SSC, and I also appreciate the positive response, and I think I mentioned that before, of the Southeast Fisheries Science Center to our request, and, of course, then the work by you and the analysts, the assessment team, to complete the analysis, and so let's do clarifying questions, and I'm asking SSC members kind of to hold discussion until we go through the action items. Any clarifying questions for Nikolai? Any hands up, Judd?

DR. CURTIS: No hands raised.

DR. REICHERT: Okay, and we'll give the SSC a moment to ponder the presentation and the report. Of course, the report provides a lot more detail than Nikolai provided, but, as I said earlier, a lot of this was very similar to what we've seen before, and so, if there are no questions, I hope

Nikolai, you're able to join us for the discussions in case anything comes up, and we appreciate that.

DR. CURTIS: For the SSC members, I've emailed this presentation, that Nikolai just provided early this morning, and so check your inboxes for a copy of that, and then the report, of course, was added to the briefing book.

DR. REICHERT: Thanks for that, Judd. Still no hands up for questions, and then let's move to public comment. Anyone that wants to provide public comment -- Was there any written, other than that what Dewey provided earlier? Anyone want to make public comment? Are there any hands raised, Judd?

DR. CURTIS: I see Dewey with his hand raised. Go ahead, Dewey.

MR. HEMILRIGHT: Yes, and I kind of -- Can you go back to your graph, and I think your very first one, that showed length comps, please, Nikolai, or your next one before that, your color scheme here. If you go look at landings, generally, it's my thought that you always catch smaller fish in the south, and talking with fishermen, and I don't see really much has changed in eight years of the fishing in the south, from what I've heard, looking at landings, where they've came from, you know, and so I'm kind of -- Not really alarmed, but skeptical of the outcome of the DLM toolkit being used south of Cape Hatteras.

The only other thing that you have is commercial landings from South of Cape Hatteras. If you look at the MRIP that's used, and it would be interesting if MRIP from each state would be shown what was -- What MRIP is showing for landing from each state, because, when you look at the SADL work, you don't have blueline tilefish throughout the South Atlantic in every state in abundance. It's certain pockets, and so it leads me --

When I see this outcome here, it doesn't look like that the potential, and I guess I'll have to wait for the discussion of what the outcome of the discussions will be with an ABC coming out of this, that's equal to or greater than in years past. I'm very skeptical of the data, or how the DLM toolkit uses this, given the knowledge where no increasing catches happen south of Cape Hatteras, to my knowledge, and I don't have the data available to see which state it comes from, but, looking at total landings, and commercial, not much has changed since 2015, but I still would like to look at the MRIP data from each state, which I don't have that available, but maybe I'll request that in some future date. Thank you.

DR. REICHERT: Thanks, Dewey, for that input. We appreciate that. Any other public comment, Judd?

DR. CURTIS: Not seeing any other hands, Marcel.

DR. REICHERT: Okay. Then let's move to the action items, if you can bring them up, Judd. Okay. All right. The first one is relative to review the assessment. I don't believe there were TORs, but there was the request from the SSC. I already made a remark about the fact that we appreciate that positive response, and I feel that the request from the SSC was satisfactorily addressed. The SSC's request was addressed, and then to the SSC's satisfaction. Any other

comments relative to that first bullet point, and I'll have some text that you can add to express our appreciation, and so the second bullet --

DR. COLLIER: Marcel, you might be muted.

DR. REICHERT: No, I'm not. Can you guys hear me?

DR. COLLIER: You just started saying "second bullet point", and then you went out.

DR. REICHERT: Sorry, because I saw that Judd was starting to write, and so I decided to halt until Judd was finished writing. The second bullet point, does the assessment reliably capture past trends in the fishery and population, and that kind of depends on -- Well, perhaps we should have a brief discussion, in terms of the methods that the SSC is most comfortable with, because that may --

Depending on the outcome of that discussion, the answers of some of these following questions may be different, and so I would like to open the floor for a discussion relative to the method the SSC would like to recommend for the southern region. If we are consistent with the northern region, then it would be the CC1 method, but would like to open the floor for discussion relative to that point, and, if there are no hands, then, for the sake of the discussion, I am proposing that the SSC recommends using the CC1 method for formulating ABC recommendations to the council, and then we need to provide some justification for that. Anyone? Jim, go ahead.

MR. GARTLAND: Just a couple of points. I mean, first of all, with the ML methods, it was interesting that they weren't great, but they were better than what we had in the north, and, you know, we were discussing earlier what might be the cause of the problem in the north, and it almost seems like we could -- That this experiment here, by doing it in the north and south, narrowed it down pretty well, I think, to the Lbar, and so that's just an interesting observation, but, that said, I mean, given the spread on those, on those distributions, I still wouldn't be comfortable with using the ML methods for the south either.

Probably, again, the same situation I think as with the north. You know, catch-based methods, and I believe it's -- I forget what the abbreviations are, but the most recent five years of catch, and I think that was CC1, is probably the best leg to stand on.

DR. REICHERT: Does that mean the ML includes the other -- I'm drawing a blank, but the yield per recruit, and sorry. ML-based and the yield-per-recruit methods. Should we add ML-based and yield-per-recruit, because I think it was the same issue for both, correct, that Nikolai presented, or is that basically -- Please remind me, and that's different than an ML-based, right?

DR. KLIBANSKY: This is Nikolai, and I'll just jump in and say that, you know, one of the mean length methods used a yield-per-recruit analysis.

DR. REICHERT: Okay. Sorry about that.

DR. KLIBANSKY: To estimate an FMSY, and the other one used a different approach.

DR. REICHERT: Sorry. Thanks. So what I'm trying to get at is the ML-based methods include the -- That's inclusive of the yield-per-recruit, and I just wanted to make sure, because you presented both, and I just want to make sure that we are documenting that correctly. I see Steve, and then Jim, but, again, thanks for that clarification, Nikolai. Steve, go ahead. Steve, if you're talking, we cannot hear you.

DR. COLLIER: Steve, it shows you're unmuted, but we can't hear you.

DR. REICHERT: I hear something very, very faint. Okay, and, while we are trying to solve Steve's technical question, Jim.

MR. GARTLAND: Just an additional thought on the justification. Given that the data types available in the south were pretty much the same as those available in the north, I think following the assessment approach, in terms of what we propose is the most preferred method for the south, it probably makes sense to follow the north as well, in that regard.

DR. REICHERT: I agree, and thank you for that. Steve, are you able to speak and be heard?

DR. COLLIER: It looks like Steve dropped off, real quick. He might be coming back.

DR. REICHERT: While we are waiting for Steve, anyone else? We're waiting to hear from Steve, but the consensus is to recommend the CC1 method for developing ABC recommendations. Is Steve -- Mike, go ahead.

DR. SCHMIDTKE: Marcel, I guess kind of in similar spirit to the question, or comment, that I made earlier for the northern region, do you all -- Does the SSC feel that this is the exact same situation in the south of Hatteras region, in that you have no other information to go on, and so you only -- So applying an average catch method in a situation where catch has already been limited, and that affects what the average ends up being, and is that the same situation, or do you feel like there is some additional information that you have in the southern, the south of Cape Hatteras region, that would potentially justify some other alternative procedure?

DR. REICHERT: Well, what alternative procedure would that be, because I -- What I would do is refer to our extensive discussions we had in April, where, yes, there may have been some additional information available, for instance the index, but that ended so long ago that it was difficult to use that as -- Use that for developing ABC recommendations, and so that's where we ended up, and, given what we have available, I'm not sure what additional information we could potentially base a different ABC recommendation on.

At least I don't remember anything that was brought up in our April meeting, and so I -- But I would like to hear from other SSC members relative to -- Because Mike makes a valid point, and so, people, please speak up. I would like to hear from a little more people than we have heard from thus far, and so please speak up. Steve, you're back.

DR. TURNER: Yes, and can you hear me?

DR. REICHERT: Yes, and we can hear you loud and clear. Go ahead.

DR. TURNER: Great. Thank you. So it's -- I wonder whether we need to discuss the age-aggregated production model in this context, before we talk about the DLM methods, and am I correct about that?

DR. REICHERT: Well, not necessarily, because we discussed it during our April meeting.

DR. TURNER: Right, but --

DR. REICHERT: We dismissed using that in our April meeting.

DR. TURNER: But we need to present that to the council, right, or have you already done that?

DR. REICHERT: No, but we have our report, that we approved, that detailed that those discussions and how we came to rejecting that method.

DR. TURNER: Okay.

DR. REICHERT: That doesn't mean -- Go ahead.

DR. TURNER: Thank you. It sounds like you have it covered.

DR. REICHERT: Okay. Thank you. Anyone else? Mike, go ahead.

DR. SCHMIDTKE: I guess is there any value to that age-structured production model, and not in the sense that you would derive your MSY estimate from it, but that you would take into account the pattern that you see there, where catch was decreased, and it was a management impact. Management decreased the catch that was coming out in the more recent time series. You saw kind of an initial higher level potential MSY value. and a drop in the stock, as a result of a high amount of catch.

Once catch kind of leveled out towards the end of the time series, you saw what began an uptick, and, obviously, the model carried it forward to a level that folks were not comfortable with, but at least what began an uptick in response to lower catch levels, and so, I guess, is there no information to be gained from that, to combine with an average catch, to adjust it somewhere in between these methods, or is the SSC intent to like pick one method, versus another, and not have any informing of the two?

DR. REICHERT: As a clarification, Mike, you're talking about upticks, and can you -- So upticks in what?

DR. SCHMIDTKE: In the index, because the reason why the index kind of flew off the handle, towards the end of the time series, is because it was being projected forward, but like the last year or two was starting to -- That was the uptick that happened, I think around 2015 or 2016, if I'm remembering right.

DR. REICHERT: Sorry, and what index are you talking about? Sorry, and I'm a little confused.

DR. SCHMIDTKE: It was the index that you all discussed for the ASPIC model at the last meeting.

DR. REICHERT: Is that the index that was used, or are you talking about the short bottom longline index that was not used?

DR. SCHMIDTKE: The one that was used. The one that was used.

DR. REICHERT: But that ended way back.

DR. SCHMIDTKE: Right. Right. That's what I'm saying, and so I'm clarifying that there is no information to be gained from that index, for management, for determining what an appropriate catch level is.

DR. REICHERT: Not for now. Well, I mean, and this is just my opinion. How long ago did that end, like fifteen years or something? I think we clearly discussed that the end of the index that was used in the assessment, that was discussed in April, was the same that was used in SEDAR 50, but now there were added years, that had no index, and so that was one of the things that the SSC was very uncomfortable with, and so, in that respect, I don't think, in terms of the index, whether there is additional information available that we can use now.

My other argument would be that, you know, the SSC rejected that method, and so, anyway, I'm trying to wrap my head around, in terms of information, if we are rejecting -- If we have rejected that, and then we are now still using it, that should -- That would need a very, very strong justification for using it now, while we previously rejected it, but, really, I would like to hear from other SSC members.

I mean, there's only a few people that I've heard from. I would really like to hear what other people are thinking about relative to this discussion, because it's a consensus. The entire SSC should be comfortable with the decisions that we are making, and so I would like to hear from others. Fred, go ahead.

DR. SCHARF: Marcel, can you hear me okay?

DR. REICHERT: Yes, and we can hear you loud and clear.

DR. SCHARF: So I was looking at the -- I guess is the justification for going with the CC1 data-limited approach, which is using just the most recent five years of catches, versus the average over the time series, which was the AVC approach, and is the justification for going CC1 because that was what was decided on for the northern, and to remain consistent, and it just -- You know, the catch series doesn't seem to be -- From 1987 into the present, it doesn't seem to be changing very much, and so, you know, it doesn't -- If we use the average catch, it, -- You know, the median estimate for the TAC, if we use the average catch, would be, you know, 133,000, as opposed to 115,000 for CC1.

The distribution of the average catch kind of mirrors what you see from the longline, or the handline, surveys that Nikolai presented, where you see the -- Except that the handline surveys are

shifted a little higher, that the TACs are closer to 200,000, and, you know, I keep coming back to the catch, and the length distributions in the catch.

Jeff brought it up for the northern stock, and you see it in the southern stock too, where, in the last decade, or maybe even fifteen years, you don't see any fish below 400 anymore, and so the question is whether there might be a recruitment issue happening, where you just don't see -- Unless there's been, you know, changes in gear selectivity that would prevent those smaller fish from being caught in the industry, and so the average catch, to me, seems like a nice --

It provides that buffer, in case there's a recruitment issue happening, relative to what we were seeing from the handline survey and the age-aggregated model, which we -- I know we rejected, but it just seems like -- I'm just trying to think about our justification between CC1 and average C. I'm sorry, and I didn't really provide any clear advice. I'm just sort of -- I'm just sort of talking as I look at these plots, and I'm not sure which is the best way for us to go, you know, in terms of consensus.

DR. REICHERT: I don't know, and, well, I don't believe the CC1 method -- For me, it was just to start the conversation, to start the discussion.

DR. SCHARF: Okay.

DR. REICHERT: It was not necessarily because that was what was done in the northern region. If we can justify using a different method in the southern region, then the SSC can certainly do so, and we need to justify why we were doing that, and, you know, if you gave a -- You gave potentially a justification for doing so. In terms of the smaller sizes, and, Nikolai, correct me if I'm wrong, the N was very -- It was relatively low, again, in more recent years, and so the lack of certain sizes may have been due to the sample size, but I'm not sure if that's reasonable or not. I saw Judd had his hand up. Go ahead.

DR. CURTIS: Thanks to Fred's point, and some context for the northern region model, right, I think the subgroup went with the recent five-year average catch, that CC1 management procedure, mostly due to kind of that emergence of the fishery in the Mid-Atlantic, as we were seeing that started increasing over the last five to ten years, and so it was a very different regime than it had been throughout the historical time series.

With the southern region model, you don't have that pronounced difference in those trajectories of the catch, and so having an average catch over the entire time series is a valid approach as well, and, just because we chose, or the SSC selected, that average catch for the northern model, it doesn't bind them into using that same management procedure for the southern model, and one of the other management procedures is perfectly acceptable to use for the basis of an ABC recommendation, if that's the most scientifically-justifiable approach. Thanks.

DR. REICHERT: Yes. Does that make sense, Fred?

DR. SCHARF: Yes. Yes, it does. You know, I mean, I was -- I was looking at the, you know, at the lengths, you know, the catch at length, from slide 5 in Nikolai's presentation, and you're -- You know, you're absolutely right that the sample sizes are low in the more recent, since 2007, and most of the years have less than a hundred fish.

Most have less than fifty from the commercial long line, but there are -- You know, there are some years, earlier in the time series, with lower sample sizes that still pick up those small fish, and, in 2015, you know, the sample size is only sixty-seven, but yet it picked up -- It picked up a really large, you know, blip in really big fish, that you don't see in the other years, and so it seems like, you know, just to say that it's sample size, and that's why we're not seeing any of those fish in the 300 to 400 range, like we used to -- You know, I'm not sure that we can just completely dismiss that, and just say it's sample size, but it did seem that the --

You know, the average catch DLM approach that Nikolai presented, in terms of the shape of the distribution, was similar to the average catch of the handline index in the ASPIC model, which the handline was the index that had a much tighter fit within those ASPIC models, and so, just in terms of the, you know, frequency of the estimated catches, based on, you know, the full distribution, they have a similar shape, which says something, that they may be responding to some of the same sort of key inputs, you know, population inputs, even though the DLM model doesn't include that much information, but the handline index definitely seemed to be a more robust index, from the ASPIC model.

Using the average catch, we would still push the TAC back, you know, to almost less than half of what that approach is, which would account for some potential recruitment issues that are hard for us to see, because we lack the survey data.

DR. REICHERT: Okay. Yes, and, I mean -- Well, two things. I think the handline was the only index available for the previous model, and I am personally comfortable with selecting the AVC over the CC1 method, based on what you just laid out. I see Jeff and Jim have their hands up. Jeff, go ahead.

DR. BUCKEL: Thanks, Marcel. I think that some of the assessment folks might know the literature better than me, but I think some of the simulation work, with these data-limited approaches, and maybe not the average catch approaches, or maybe, but show that using the longer time series is better than the shorter time series, and so I agree with what's been said before, but there might be another justification for using the average catch over the long time series, just from the literature on these data-limited approaches, but I just -- I would defer, just to check with some of the assessment scientists that are on the call, if they could confirm that, but, you know, I don't think we need to be wedded to CC1, just because of the reasons that have been said before.

DR. REICHERT: Yes, and I agree. The only caveat I would mention is sometimes there are signals in the catch streams, like a significant increase, or a significant decrease, that may need some caution, in terms of using a longer time series, but, in general, I agree. I'm not sure if Nikolai can, or Erik can, address your question, Jeff. While I let them ponder, Jim, I saw your hand up.

MR. GARTLAND: Yes, and I had two questions. The first one is related to the size information from the commercial longline, and, you know, I agree that it looked like the little stuff wasn't there as much as it had been, but, again, sample sizes are smaller, and just a question I had, if anybody from the SADL survey is still on, and are you seeing smaller fish on that? I know there's not much of a time series yet, for a trend, but are you catching little ones?

DR. REICHERT: Wally, I don't want to put you on the spot, but -- Or someone else?

DR. BUBLEY: I don't know how much I'll have to offer, because we haven't explored the length frequencies too much with this, to have any definitive ideas as to what's going on, if there's -- If we're seeing any changes, and, as you mentioned, I mean, we're working off of four years of catch, basically, and so there might -- It might be a little noisy, and we might not be able to completely tell at that point.

DR. REICHERT: Yet again, I think that highlights the importance of that survey.

MR. GARTLAND: No, and I totally agree, and my thinking on it was that, even though you might not see a trend in it, you know, there might be better coverage from that survey than there was from the sampling of the longline fishery for length comps, and so, you know, even if you guys are -- If there's not a time series of it, if you're catching them, they're there, you know, that kind of idea.

Then my second question was, given the stability of what we're seeing in everything, would an average catch approach basically hold things almost status quo-ish for the fishery, because it almost seems like we don't need to do -- It seems to be running along fine, and almost like we don't need to do too much.

DR. REICHERT: Well, yes, for the -- Yes, and I'm not sure how to answer that, but my thought is also if there -- You know, a related question is, if you -- Are we leaving fish on the table for the fishery?

MR. GARTLAND: Right.

DR. REICHERT: If you can sustainably harvest more fish, then we should certainly consider including that in our recommendation, but, you know, we don't know that. Mike, I saw your hand up. I'll go to you first. Nikolai, or Erik, do you potentially have a question to Jeff's -- An answer to Jeff's question about literature, suggesting that the longer time series may be preferable?

DR. KLIBANSKY: Go ahead. I think I heard Nikolai.

DR. KLIBANSKY: This is Nikolai. Part of my answer is, no, I don't know if the longer time series is preferable, based on the literature, but I guess I wanted to just sort of add like one of -- I think one of my concerns with the average catch methods, in this situation south of Hatteras, is -- Or just, you know, thoughts about it, is that -- Is that the, you know, the catches here -- Kind of to Mike Schmidtke's point earlier, the catches are -- At least since quotas were put in place in 2012, I think, you know, the catches have been limited by those ACLs, and, you know, and then even, since SEDAR 50, they were based on the age-aggregated production model, and so CC1 is, you know, going to be based on catches that were a function of the MSY set in SEDAR 50.

I'm just sort of wondering how you -- I guess I'm a little surprised to be going down this road, and like it seems like the catch levels might be like lower than what they were set after SEDAR 50, based on the average catches that are a function of the SEDAR 50.

DR. REICHERT: Yes. Yes, and, no, that's -- Yes, and thanks, Nikolai, for that. Mike, I saw your hand up. Go ahead.

DR. SCHMIDTKE: This is just addressing, I guess, one information source relative to the size information for south of Hatteras. Looking at the fishery performance report for blueline tilefish that was completed by the advisory panel, we've got a commercial fisherman off of Daytona that commented basically seeing consistency in size that is available to them over time, in the areas that they're familiar, and they caught medium to small blueline tilefish in similar areas, kind of mixed together, and also in a similar area that they would catch small to medium or large snowy grouper, and so just putting that information source out there.

DR. REICHERT: Thanks, and I think we mentioned that in one of the reports, that -- So we appreciate that. Chris, go ahead.

DR. DUMAS: Thanks, and I've been looking -- Doing some additional looking at some of the data that Mr. Hemilright sent, and looking at the data from Wanchese, and I just wanted to point out a couple of things. One is the 300-pound trip limit went into effect in 2016, it looks like, and that could affect, you know, the sizes, if some highgrading started happening in 2016, and maybe that's why your lengths -- That you're missing some of the smaller lengths, and maybe there was some highgrading going on since 2016. I don't know. Another thing is that, if you look at the average catch per trip, it's been right at that trip limit.

DR. REICHERT: Is that based on the information that Dewey provided?

DR. DUMAS: Yes.

DR. REICHERT: Yes, and, I mean, we are -- I agree, but we're talking about a southern part, and so, I mean, you potentially could expect the same thing happening in the southern region, and that's assuming the same thing happens in the southern region, right?

DR. DUMAS: Right, or something similar, and so the trip limit went in in the South Atlantic, right?

DR. REICHERT: Yes, and we're talking about the reaching the trip limit.

DR. DUMAS: Right, and so, at least in that area -- So that could explain, you know, some of the -- I don't know, and I'm just putting that out there, but two other points. One, so they've been right at their trip limit, as far as catch per trip, but the total pounds caught out of Wanchese went up a lot from 2019 to 2022, 2023, and then it has kind of stabilized, and that was sort of directly mirrored by the increase in trips from 2019 to 2023, and then the trips stabilized.

You know, the catch per trip is staying at the trip limit, and what's changing the catch is changes in the number of trips, and so I'm trying to think about how that relates to using CC1, versus the other one, the one that's based on the latest five years, versus the whole average, versus the whole time series, when you've got not only an ACL cap, but you've also got a trip limit, and you're at the trip limit, and also potentially the ACL cap, and then what's driving the changes in the catch is changes in the number of trips.

DR. TURNER: To that point?

DR. REICHERT: Steve, one second. I just want to make sure we are comparing apples and apples, and so let's make sure that we, for the record, clearly indicate what region are we talking about, where that data is coming from.

DR. TURNER: So it is my understanding that that Wanchese fishery is basically from the sliver, rather than from the southern area.

DR. REICHERT: Exactly.

DR. TURNER: Now, someone who knows the fishery a little better than me could correct me, but that's my understanding, and so, as Marcel is pointing out, we're talking about apples and oranges.

DR. DUMAS: I see. Okay, and so I apologize for that then. I guess my points would apply more to the sliver area. Thank you.

DR. TURNER: We need to be sure that I'm correct, that Wanchese data is really from the sliver area.

DR. CURTIS: The Wanchese data is from the sliver area, but that is under the jurisdiction of the South Atlantic, and so any trip limits imposed to what you're seeing in the southern region catch would also apply to those Wanchese data.

DR. REICHERT: Exactly.

DR. CURTIS: Because it's part of the entire jurisdiction.

DR. TURNER: But, in terms of which average catch model we use, that applies to the south, and so, if this discussion is related to which average catch model we're going to use, then that discussion doesn't apply, you know, in terms of being limited out.

DR. REICHERT: Thanks, Steve, and that was the point I was trying to make. The regulations are similar, but the fishery may operate a little different in that sliver than it is in the south, but, you know, some of the points are well taken, in terms of -- You know, that goes back to what Mike said earlier, in terms of the effect of management on catches, but the question I have -- Because I was a little confused, Mike, and CC1 and average catch -- They have similar -- The impact of regulations is similar, other than it affects a smaller number of years in CC1, correct? Mike, go ahead.

DR. SCHMITKE: So average catch would include -- I would need to see how far back average catch goes. I don't remember at the moment, but I think average catch would potentially include the time series portion when there was no limitation on annual catch, and so it would have some time period in the more recent time that has limitations on annual catch, and some time period previous to that, previous to 2012, when this was just the fishery operating without an annual catch limit, whereas CC1 would have limitations in every year.

DR. REICHERT: Yes. Nikolai, a question for you. If I look at Figure 5 from your report, I assume, the series used here, that is what you used for average catch, and so that is 1988 is the

earliest year, and so the peak, and the not-developed fishery, is outside that time series. Am I interpreting that correct?

DR. KLIBANSKY: Maybe give me a second to pull up that figure, or you could pull it up on the -- So the average catch time series, I can just state was from 1987 to 2023, and so I think the ACLs went into effect in -- It's just worth looking at, I think, because, you know, if you look, I think that the ACLs went in in 2012, and then, prior to that, my understanding is that there was -- The only regulations prior to that were bag limits on the recreational fleet, that went into effect in 1994. To me, and like you can compute this, and I think I did in the report actually, but I think the average removals there, from 1987 to, you know, before the ACLs went into effect, was about the same, or maybe even a little lower, than the more recent years.

DR. REICHERT: Okay. Thanks. I hope that helps clarify, and so I would like to hear from the SSC, whether or not we recommend the average catch or the CC1 method, and I think it was Fred who recommended, or suggested, that the SSC should perhaps consider the average catch. Jeff, go ahead.

DR. BUCKEL: There's been some comments made that there's a concern using years where there's an ACL, right, that bounds the catch, and so, similarly, for the northern data-limited approach, when did they have ACLs in that area too, and what years did those go in?

DR. REICHERT: I believe, and someone correct me, for the Mid-Atlantic, there were no regulations, correct? For the South Atlantic, it was the same in the sliver as it was for the rest of the South Atlantic, but someone please correct me if that's not true. Mike, can you confirm that?

DR. SCHMIDTKE: Yes, and that's --

DR. REICHERT: Or correct it.

DR. SCHMIDTKE: Well, I can get an exact date, but the Mid-Atlantic -- They would have put their ACLs in -- It was around the time of SEDAR 50, and so I want to say maybe 2018, somewhere around there, was their first year, but I can get an exact year for it. That would be the first year from Virginia north that an annual catch limit was in place. Prior to that, there were some state regulations on how many fish could be landed, but nothing in terms of an annual limit.

DR. REICHERT: Yes, and thank you for that clarification, and so what's the pleasure of the group, CC1 or average catch? We've heard arguments both way. I think the most recent recommendation was to use the average catch over the time series, and it would be good in our report to list that that is 1988 through 2023.

DR. KLIBANSKY: 1987.

DR. REICHERT: 1987. Sorry. I was counting back the dots on Figure 5. Anyone disagree with that, given the discussion we've had? People? Anyone? Jim.

MR. GARTLAND: I'm not disagreeing with you, but I just -- Could we look at that plot one more time, that has the humps with all the different options, just so I can see it one more time and think about it?

DR. REICHERT: That one?

MR. GARTLAND: That's the one. Thank you.

DR. REICHERT: Okay. I'll give you a second to ponder that.

DR. TURNER: This is Steve. I agree with --

DR. REICHERT: Go ahead.

DR. TURNER: This is Steve. I agree with using the average catch, rather than CC1.

DR. REICHERT: Thank you. Chris.

DR. DUMAS: But so, if ACLs are in place, and we're at the ACL, or if the ACL is binding, then all catch is telling us is a level of ACL.

DR. REICHERT: Yes.

DR. DUMAS: Because if the stock -- Without the ACL, if catch would be higher, and say the stock is improving, we won't see that, because catch is bounded by the ACL.

DR. REICHERT: Exactly, and that was --

DR. DUMAS: On the other hand, if the stock, you know, is decreasing, and if we did not have an ACL, we would see catches going down, but we're not going to see that, because we're at the ACL, and so we're not going to see that decreasing trend if the decreasing trend is occurring above the current ACL, and so -- You know, I guess that's obvious to everyone, but, you know, if ACLs have been in place, and we've been at the ACL, then all CC1 is telling us is the level of ACL.

DR. REICHERT: Yes. Exactly, and that's the point that Mike brought up earlier, both for the northern part and the southern part, that that -- You know, that catch stream is affected by management.

DR. DUMAS: But, in a similar way, if we're at the ACLs right now, and if the ACLs stay in place, then what happened a long time ago isn't relevant, because right now we're at the ACL, and that's what's binding us, and that's what's relevant, and so, you know, we won't see any changes.

DR. REICHERT: Yes, and so what's the --

DR. DUMAS: So I'm sorry that that doesn't help answer your question, but I think I just -- I'm not seeing how either one is better, if we're -- If all we have is catch, and catch is constrained at the ACL.

DR. REICHERT: Exactly, and so, within that -- Within that confound, we are asked, or I'm asking the committee, you know, given all the caveats, whether the recommendation is CC1 or average

catch, and that's the conundrum we are in, basically, in terms of the data limitations. Steve, to that point.

DR. TURNER: No, and this is not a perfect situation. We don't have the SADL survey to inform a production model, but a great deal of the average catch time series was in place when the ACL was not in place, or a lot of the average catch occurred before the ACL was in place, and so my feeling is we're stuck with that one, even though it is not perfect. Thank you.

DR. REICHERT: Thanks, Steve. Fred, go ahead.

DR. SCHARF: Yes, and that was actually what my point, two of the points Steve just mentioned. One is we have a long time series of catch, right, the vector that Nikolai used from 1987 to 2023 that shows stability, and some of that occurred without an ACL, and then some of it occurred more recently with an ACL, and so you have periods where an ACL was in place, and where it wasn't, and yet that time series is mostly stable.

To me, that's an argument to use that time series, and then the other is, yes, in terms of being able to follow what happens going forward, you know, coming back to what Chris was saying about being able to see how the stock responds, I think that's where we're really going to lean on the SADL survey, and once we have the SADL survey, you know, because landings can change for lots of reasons, and it doesn't necessarily reflect stock productivity.

DR. REICHERT: Thank you for that, Fred. Jim.

MR. GARTLAND: So we're recommending -- It looks like we're heading toward recommending the average catch as the ABC, but the average catch is based on the ACL. Is there a way that we put in there that -- Put just that in there, right, so that there's not confusion, that it has to be reduced for -- I mean, it's basically -- What we're putting forward is that the ABC already has previous scientific and management uncertainty in it, right?

DR. REICHERT: Yes.

MR. GARTLAND: Do we note that somehow?

DR. REICHERT: Yes. Well, and that's what we need to -- The discussion up to now has been what method to use, and then, when we go through the other action items, which are similar to the ones we discussed before, we should absolutely put that in there.

MR. GARTLAND: Gotcha.

DR. REICHERT: So, if we forget, please remind us, and so it sounds like the consensus is using average catch, based on the arguments, or based on the discussion, that we've just had. Chris, go ahead.

DR. DUMAS: So one more difference between CC1 and ABC is let's suppose the stock starts going down, and so catches start going below the ACL. Then, if we use CC1, that'll give more weight to the most recent data. In my hypothetical example, that would be the most recent years when the stock was going down, but, if we use ABC, it's not going to give as much weight to those

more recent years, and so, if we see stock starting to crash, it won't affect the ABC very much, whereas it would affect the CC1, and so, you know, the CC1 would be more responsive to a declining stock, compared to the ABC.

DR. REICHERT: I'm not sure I understand that. The difference is not that large, and so it's just a number that we arrive at, and so, in terms of the direction of the stock -- I'm having a hard time wrapping my head around that, but I may be misunderstanding what you're saying, which is entirely possible.

DR. DUMAS: So, with CC1, each -- It's the average of the most recent five years.

DR. REICHERT: Yes.

DR. DUMAS: So the most recent year always gets a weight of one-fifth, whereas, with ABC, it's averaging over the entire time series, and so the most recent year only gets a weight of one over whatever, thirty, thirty years, or however many years, but that's my only point. I'm not saying one is better than the other, and I'm just saying that's another difference between the two.

DR. REICHERT: Yes, but then, if you look at the time series, there's quite a bit of variability around that average, but, if you look at the last one, two, three, four, you know, it kind of bounces back and forth. It almost seems like -- Anyway. Thanks, and I see where you're coming from. Mike, I saw your hand up, and then I would really like to move on, because we have a bunch of other stuff still to decide on. Mike, go ahead.

DR. SCHMIDTKE: Yes, and I think, clarifying, it sounded like, from what Chris was describing, that he had interpreted the CC1 to be kind of a dynamic, the most recent five years, and, as I understand your discussion, it would be static, set from this point forward, that the number wouldn't change each year, and that it would be the most recent five years at this point, and so 2019 through 2023, and then that number would apply moving into the future.

DR. REICHERT: Exactly. So it's a static ABC. It's a number that is carried forward. The same number is carried forward.

DR. DUMAS: Thanks, Mike. I did misunderstand that. Thanks.

DR. REICHERT: Okay. Thank you. All right, and so, Judd, can you bring up the -- Can you cross out the CC1, that recommends using the ABC for management as an ABC recommendation, and let's move to the bullets, if you don't mind, and so does the assessment reliably catch past trends in fishery and population, as with the previous one? Fishery, yes. Population, no.

Then we can, I think, copy the same text we have from the northern population, that the DLMtool does not provide a description of population dynamics, time series of abundance, biomass, exploitation levels, et cetera, and so what is important for us to list here is that the SSC recommends that there's no OFL. There's no OFL available, and so OFL is unknown, and the outcome of the average catch is considered an ABC, and please raise your hand if you want to add or change that text.

The next bullet point is does the assessment provide reliable predictions? Same as with the north, the DLM does not provide projections. The DLM provides a TAC that's based on the time series of historical catches, and the average catch series is used in place of projections. Sorry if you guys hear my cat. I have a very vocal cat running around in this room. All right. Next.

DR. CURTIS: Steve has his hand up.

DR. REICHERT: Steve, go ahead. Sorry.

DR. TURNER: Shouldn't the ABC coming out of the average catch be treated as an ACL?

DR. REICHERT: No, and the ACL is determined by the council.

DR. TURNER: Right.

DR. REICHERT: The SSC provides the ABC.

DR. TURNER: But I think the point earlier was that there's already been -- That it's very similar to the current ACL. The ABC is very similar to the current ACL, and so is there some feeling for the SSC to treat it as an ACL, because of that similarity?

DR. REICHERT: But that's the purview of the council.

DR. CURTIS: Steve, the purview SSC is to set the ABC. In this case, I mean, you're right, and it's the catch limit that is basically being reflected by that TAC estimates. In this case, the ACL is equal to the ABC, and that's what the SSC needs to determine, and not the ACL, which is under the management purview.

DR. REICHERT: But the point is -- We need to make sure that that's reflected somewhere, that the conundrum with using the average catch is that is affected by management, and that need to be captured somewhere, and so your point is well taken, but, in terms of formally, it's the council that determines ACL, but again, your point is taken. Jim, I saw your hand up.

MR. GARTLAND: Yes, and so, to that same line that Steve was talking about, I think, you know, I agree that we can't tell the council what to do with ACLs, but I think we should say -- I think it says something like -- If you could scroll up, Judd, if you don't mind, when you're done typing, but, basically, something along the lines of the outcome of the average catch MP is based on ACLs, and is provided as the ABC by the SSC, or something. You know what I'm saying? So that it's clear that the council will see that, hey, this is -- These average catches are really the ACLs that they had set. Does that make sense? I think that's where we can capture it below.

DR. REICHERT: Yes, and I'm uncomfortable with how that reads right now, that the outcome represents more an ACL. I would be much more comfortable saying that the outcome of the catch-based MP ABC is affected by management, and then, between brackets, the ACL, or something like that.

MR. GARTLAND: I wonder if we could say like the outcome of the catch-based MP ABC is based on ACLs that were set by management.

DR. REICHERT: Well, I'm not sure if it's based on the ACL. It's affected by ACL, because there may be years where the ACL was not reached.

MR. GARTLAND: Yes, and I got you.

DR. REICHERT: I want to be a little careful, in terms of our language here, and we can wordsmith a little more, but methods are constrained by ACL. Yes, and I think that actually -- Including trip limits, and I think it's already there, but we can wordsmith that a little more. I have Jim, to that point, or did you just -- Okay. Fred, go ahead. Fred Serchuk. Fred, if you're talking, we cannot hear you.

DR. SERCHUK: Can you hear me now?

DR. REICHERT: Yes, and now we can hear you. Go ahead.

DR. SERCHUK: Okay, and I know we haven't got there yet, but I'm concerned about the low level of size frequency sampling in the fishery, and I'm wondering whether we can make a comment, someplace in our review, about the need to improve that. If we go to Figure 7, for example, there were very few samples taken in the past four or five years.

You can see seven in 2023, but one the year before that, and three the year before that, and five the year before that. These are very, very low numbers. Even though there looks like to be a consistency in the size frequency, you know, having less than ten samples a year, it seems to me, is a very low number, and I'm just wondering, and is there any comment we can make, or any advice we can provide, to enhance the sampling, so we have a better idea, and more confidence, in the size frequency distributions? Thank you.

DR. REICHERT: Thanks, Fred. Absolutely. That comes to one of our following action items, and so hold that thought if we forget it, but, yes, absolutely. Anne, go ahead,

MS. MARKWITH: I was just going to respond to Fred's comment, but I can hold it, if we're going to bring it up later.

DR. REICHERT: Yes, if you don't mind, so we kind of keep the conversation focused on the action points, and so please hold your thought. Judd, where were we?

DR. CURTIS: I think moving into the assessment uncertainties, which we have captured certainly in the previous section for the most part up here, but if there's anything else, and I'll cut-and-paste some of these concerns during the discussion and the Q&A, and add them to the uncertainties down here, in the interest of time, but, if there's anything else to add, that hasn't already been discussed, we can add that here now.

DR. REICHERT: Okay. Thanks, Judd, and, also, we can look at the previous section, the northern, and I think there's a lot of similarities there that we can cut-and-paste in here, too. The next action item is here again with the BSIA. Yes, given the uncertainties of the data-limited methods, and then is it acceptable for use in management? This is maybe where we want to reply that when repeated OFL is unknown, and the ABC is provided, but we already have captured that above.

Apply the ABC control rule, similar to the northern part, and, you know, we used Tier 4, but it's good to say that that use method is consistent with the one that was used for the northern part, and so use the language, yes. Steve, go ahead.

DR. TURNER: Yes, and is this where we bring up the similarity between the estimated ABC and the ACLs, and perhaps not recommend using the ABC control rule? I'm not sure. Thank you.

DR. REICHERT: Sorry, and say that again.

DR. TURNER: Yes, and we've been discussing the similarity of the ABC to the ACL, and the fact that some of the information we're using in the estimation is impacted by an ACL, which is not an ABC, and so maybe we recommend about not using the ABC control rule.

DR. REICHERT: Well, we are basically not using our ABC control rule, because this is Category 4, which is basically we use the -- It's SSC judgment, which is basically what we're doing here.

DR. TURNER: Okay.

DR. REICHERT: The ACL, that's a comment that we added above, that, you know, the average catch is affected by the ACL, and, thus, the ABC is affected by management, the ACL. Does that answer your question, Steve?

DR. TURNER: It does, yes.

DR. REICHERT: Okay. Thank you. Kai, go ahead. Kai, if you're talking, we cannot hear you.

DR. LORENZEN: Okay. Can you hear me now?

DR. REICHERT: Now we can hear you.

DR. LORENZEN: Okay, and so this is out of left field a little, but I was wondering whether maybe we should not make an ABC recommendation, and then the old ABC would still run, and the ACL would stay the same, for the reason that it seems we have very little really useful information in front of us, and now we end up doing an average-based ABC that, you know, is based partly off you know, of the ACLs that are in the time series, and so I was just wondering whether this is something where actually we could just not recommend an ABC, and then run with what we already have on the books.

DR. REICHERT: Well, I think we have an issue.

DR. CURTIS: One pitfall with that approach, and that's certainly on the table, if none of these management procedures seem scientifically justifiable, but the pitfall is that these data would still be -- It would then fall back to the previous assessment, which is a recreational time series, given in the CHTS units, versus an update to the FES units. A northern model has now been approved to use the new data streams, which included the FES estimates, and having different currencies, managing recreational fishing between three different sub areas, may be challenging, to say the least.

DR. REICHERT: Thank you for the clarification. You just said what I was going to say, and so I hope that answers your question, Kai, or your concern.

DR. LORENZEN: Yes, and that's fine. I was just wondering, because it does seem that we know -- We have very little really useful information.

DR. REICHERT: Yes, and I totally agree with that statement, and so okay. Thank you. So then, in terms of difficulties encountered with the ABC control rule, the same thing. You know, we can copy the text from the previous one, that, you know, Tiers 2 to 4 are not developed very well, and there is a need to discuss developing approaches, to avoid inconsistencies in our decisions.

Advise on monitoring the stock, I think same thing is true, in terms of what we discussed previously for the northern part, SADL, and someone may have mentioned something else, but please remind me if we forgot something. Fred -- Steve, go ahead.

DR. TURNER: Yes, and I was just going to point to -- I think you were about to point to Fred's concern about the number of trips, and the number of fish observed for length information.

DR. REICHERT: Yes, and that would be, I think, under the next bullet point. Thanks for reminding me. Investigate number of trips sampled, and I think it's the same for the northern part, investigate if reliable age data can be provided. That actually captured the additional research recommendations, also. Thank you, Judd. Then the guidance of the next assessment, and we extensively discussed that under the northern part, and so if you could pull the text, and I think that pretty much captures it, because the issues are very similar. Anne, go ahead.

MS. MARKWITH: I just wanted to comment on the number of trips sampled for length comps, and part of this might be a question for Nikolai as well, but those length comps were for longline only, and I know, at least in our area of North Carolina, we sample mostly hook-and-line trips, and not longline, and so most of our lengths are coming from those trips, because we really just don't have the longline trips, and I did speak to both our samplers to verify this. I mean, we do see one every so often, but I guess my question to Nikolai is why aren't those handline trips used, and just the longline trips, and I'm sure you've said this, and I just do not remember off the top of my head.

DR. KLIBANSKY: Yes, and I don't know if I said it this time, but I think that the decision was, made in SEDAR 50, to use one fleet to be representative of trends in size over time, you know, because each one of those fleets has a selectivity built into it, and so, when you combine them, you would also be combining them given those different selectivities. I think that's why we made that decision in SEDAR 50. I would have to look at the data that I have. My recollection was that actually there were even fewer lengths for handline in the data than for the longline, but I could double-check that.

MS. MARKWITH: I mean, and that's possible, just given the spread, but I was just curious, because it also goes back to that length frequency question, and we actually see -- I pulled our data, while we were talking, and we do see some of those smaller fish that aren't showing up in the longline comps, and so --

DR. KLIBANSKY: Since I'm recently speaking, and we're just talking again about small blueline, you know, since SEDAR 50, I remember having lots of discussions about where are small blueline, and so it's not a recent thing that there are very few small blueline found in any of the data, and like I think including the fishery-independent data, but also note that, despite that, you know, nearly all of the fish that have been observed in maturity samples that have been taken were mature, and so just sort of keeping in mind that we're not seeing those small fish. Most of what we're seeing are sort of these -- The smallest fish are tending to be mature adults.

DR. REICHERT: Thanks, Nicolai, and thanks, Anne. Judd, I'm thinking maybe, rather than handlines, say incorporate length compositions from various -- All fleets, or various fleets, to complement -- You know, that kind of encompasses -- That makes it a little more general than just the longline. There may be other -- Okay. Cool. Anything else? This is the end of our action items.

If you go down to our table, Judd, real quick, we don't need to do another stock rating. We'll just -- That's the same as the northern, and Judd will just fill in the table, and so that's the table, and then the other table, Table 3, is then the combined tilefish catch level recommendation for the entire South Atlantic jurisdiction, and so Judd and I will fill that out later, and so please take a look at that when the report is done.

DR. CURTIS: I've got that ready to go, Marcel.

DR. REICHERT: Okay.

DR. CURTIS: So the recap is then the average catch management procedure estimates for TAC are 133,000 pounds whole weight, and that's the southern model ABC, and the northern model and sliver portion amounts to 193,800 pounds whole weight, and so, summed together, that's 326,800 pounds whole weight for the entire South Atlantic region.

DR. REICHERT: Sounds good. Thanks, Judd. I appreciate that. Judd, I think that completes our Agenda Item 4.

DR. CURTIS: Yes, and I believe so. I will backfill some of the bullets with the other details from the section above, and from some of the notes that people have sent, and so thank you. Keep them coming on the shared document.

DR. TURNER: What about the timing of the next assessment?

DR. REICHERT: That was the same that we discussed under Agenda Item 3 for the northern part.

DR. TURNER: But SADL becomes available much sooner in the south.

DR. REICHERT: That's a good point, but we still need the -- We cannot do that independently of that sliver.

DR. TURNER: Okay.

DR. REICHERT: You know what I mean?

DR. TURNER: No, but I don't want to spend the time.

DR. REICHERT: Well, if we come up with an -- Well, that's a good point, Steve. If we provide an ABC, it is an ABC for the entire region, and so we need to include the sliver. However, an assessment for the southern part can still be done, and, if that creates a different ABC, then we can potentially add that to the existing ABC for the sliver, and so the timing of the south -- Of the southern part could potentially be different than the northern part. Please correct me if I'm wrong. Wally, I know you're going to have a solution to this conundrum.

DR. BUBLEY: Not correcting you if you're wrong, Marcel. I would never do that, but, I mean, the sliver is still included in the SADL survey, and that's been going on since the beginning, and so whether you leave it in or take it out, depending on how it functions, it would still be available, and have five years' worth of data going forward, and so whether -- How you handle it is a different story, but it is available.

DR. REICHERT: So that would mean that, theoretically, the five years would be available in 2026 for the southern region?

DR. BUBLEY: Correct. The 2025 sampling season would be the fifth year with relatively stable protocols. There was a little minor change in 2021, but so, yes, I guess. I think it's something that could be handled.

DR. REICHERT: Okay, and so it would be good -- I think it would be good to reflect that in our report, that the fifth year of the southern part of the SADL survey would be available -- It would be 2025, and so my question to the committee is, since we could potentially do that independently of the northern part, and that was the point that Steve brought up, are we recommending an update? As an SSC, recommending an update once the fifth year of the SADL survey is available, and so that would mean an update, or an assessment, in 2026 or 2027. I mean, we can recommend that. Whether that's ultimately feasible, or realistic, is something else, but --

DR. CURTIS: Marcel, I was just going to speak to that. I mean, I think you can make a recommendation saying that the SSC recommends, based -- Because of all the uncertainties with these DLM toolkit management procedures, to get an updated assessment, that incorporates the SADL survey for an index of abundance, as soon as possible.

That will have to go on the SEDAR schedule, and the incorporation of that SADL survey is a bit more of a lift than just an update, and so that will all get considered by, you know, the steering committee and the council, in addition to all the other things that are getting added, and so I would -- You can recommend it gets incorporated onto the schedule as soon as possible. I wouldn't put a stamp of a year on it at this point.

DR. REICHERT: Well, the reason I put a year on is because it was my understanding that that is something the council may want from us, to be a little more specific than "as soon as possible", but, if I'm misinterpreting that, then that's fine. I'm comfortable with the current text. I saw Mike has his hand up. Go ahead, Mike.

DR. SCHMIDTKE: Yes, and I just wanted to remind -- This doesn't necessarily, you know, contradict your recommendation, but I did want to point out that, as far as I had interpreted, the long-term vision of the SADL survey, and being able to incorporate it for those deepwater species, especially for blueline tilefish -- One of the advantages of it is that we would no longer have to split the stock at Cape Hatteras, because this is a continuous stock.

It's been identified as a continuous stock. The only reason why we split it is because of data differences north and south of Cape Hatteras, and so, if you split up the timing, then you maintain that split, but that's up to you guys, if you would like to have a portion of the stock assessed on a more expedient timeframe.

DR. REICHERT: Okay, and I completely agree. I was just saying, theoretically, it is possible to assess the southern region separate from the northern region, as has been done in the past, but I completely agree that, ideally, you would like to -- You should assess that as one stock, and we can add that language to the report, but again, Steve, that was a good point that I hadn't thought of yet. Okay. Thanks everyone. Let's move to Item 5, but, before we do that, let's take a ten-minute break, and let's come back at 3:20. Okay. We'll see everyone in about ten minutes.

(Whereupon, a recess was taken.)

DR. REICHERT: All right. It's 3:20. Let's resume the meeting here. Under Agenda Item 9, we have general public comment, but Dewey asked if he could provide his comment relative to blueline, because he's unable to stay with us until Agenda Item 9, and so, Dewey, go ahead. Are you still with us?

MR. HEMILRIGHT: Yes, I am.

DR. REICHERT: Okay, go ahead.

MR. HEMILRIGHT: I want to preference my comments as I hope nobody takes this personal at the SSC, but, having listened here to the second half of this southern part, I just see us going backwards. There's a lot of things that, if a participant that knew could participate, they could have answered a lot of your questions.

The best comment I heard probably was Kai's, that there should be a rollover, or stay the same as previous, because we're going backwards, and the fishermen are looking for an increase in quota, not the continual crumbs that we get. The stock is out there. There's fish to be harvested, and using the DLM toolkit, instead of the previous model, has done nothing but take us backwards.

You know, small fish capability, as I pointed out earlier, if you look at like hook-and-line, as Anne was saying, it would show where there's small -- You know, you can catch small fish. Not all gear is conducive to small fish.

I was looking for an outcome of on the water, as we see out there, of an increase in quota a lot more, at least staying the same as SEDAR 50, and not going behind, and, for most of folks, it takes -- Like the next stock assessment will probably be seven or eight years, and so it's frustrating that fishermen, who are out there on the water, who make their living, and we continually look at this stuff, and it doesn't seem like the data is able to be explained in a manner that is conducive to you

all's thought process, given just the limitations of knowledge, and so it's frustrating, but we definitely went backward if these numbers here stay the same, and, regrettably, that's just frustrating for fishermen, and I don't know personally how much longer I can continue with participating in a process that doesn't want to know closer to reality of on the real-world experiences out there on the ocean, and so thank you for your time.

DR. REICHERT: Thanks, Dewey. I appreciate that, as always, and you listened in on our previous conversation in April, and I think some of us, in general, share some frustration, and so, again, I appreciate your comments.

MR. HEMILRIGHT: Well, Marcel, with respect, I appreciate you all feeling my pain, but it don't turn into reality of outcomes, and so understand that, because, when you look at this process, to me, blueline tile is so limited in where it's caught at, and where the data could be given, but it don't seem like the process wants to know that. It seems like we march forward, but this is only one, the SSC and their thoughts, and there's a lot of good questions people ask, and you just didn't get no answers, and so -- But I guess that's part of the process, and so I'll continue on as long as I can, but this is truly probably one of the most frustrating, is sitting here listening to this SEDAR 92, and taking place, and giving a lot of time, free time, of watching it play out. Thank you.

DR. REICHERT: Okay. Again, thanks, Dewey. I really appreciate that. Okay, and let's move on to Agenda Item 5, the SEDAR 76 update, Attachments 5a and 5b, and Matt will provide an overview. This has been a long process. We talked a little bit about the report earlier, and so, Matt, do you have a presentation ready. Judd, do you have an introduction to this, or are we going straight to Matt's presentation?

DR. CURTIS: Not much to add, but just we have updated projection scenarios that Matt ran. Going back to the April meeting report, it was somewhat unclear whether that interim F years should have represented 2020 to 2022 or 2021 through 2023. Recall that terminal year of 2023, and the discussions that we had during the April meeting, and Matt was kind enough to run both scenarios, and so I'll let him take it away, and then we can have some discussion on the time series to be used, and any other concerns as well.

DR. REICHERT: Okay. Yes, and if I can reply to that, real quick. I looked at the minutes, and Scenarios 3 and 4, if I read the minutes correctly, and that's currently reflected in our report, Scenarios 3 and 4 were ultimately rejected by the SSC, and I think you can find a justification for that not only in the report, but also in the minutes, page 172, and the following pages, and so just in case someone wants to take a look at that, but I echo Judd's words that the SSC -- We appreciate the willingness of him to provide these Projections 3 and 4 for comparison, but I just wanted to remind the committee that we ultimately rejected those for use in our April meeting. Matt, go ahead.

DR. VINCENT: All right. Can you see the presentation now?

DR. REICHERT: Yes, we can see the presentation, and we can hear you loud and clear.

DR. VINCENT: Okay. Good. All right, and thanks, Marcel, for that clarifications of which F to use. I'll just not present 3 and 4 then, for the sake of time, and we'll dive right into it, and so at the

April meeting, we had presented an updated SEDAR 76 stock assessment, with data that went through 2023.

The result of this was that the stock was determined to be overfished, and overfishing was occurring, and then there was extensive discussion about the high F in the terminal year of the assessment, but, ultimately, the SSC decided that the stock assessment was BSIA, and then they reclassified -- They recalculated what the P* was, and so there was a request for a P* of 20 percent projections. I had completed those, and sent them to someone, Chip or Judd, but wasn't quite able to squeeze them into the previous meeting, and so the projections were requested to start from the terminal year of the assessment.

The first year of projections would be in 2024, and then you would have three interim years, and then the management would take place starting in 2027. We've clarified which interim F would be used, and so we're using the interim F of 2021 to 2023.

Additional clarification on the projections, and we already said that they'll start in 2024, and then, in those interim years of 2024 through 2026, it uses the geometric mean of the F from 2021 to 2023. The recruitment is assuming a Beverton-Holt stock-recruitment relationship, and it includes the mean deviate from the period of 2024 to 2021, and then it also adds a stochastic deviate, and so this accounts for the recent low recruitment deviates that are observed in the assessment, but it also adds variability in the stock assessment, or in the projections.

For the OFL scenario, we're using the FMSY projection scenario, and then the ABC scenario would be the P* of 20 percent of the FMSY, and so, using this F of 2021 through 2023, here are the results. You can see, starting at the top-left, that we have a high F in the first terminal three years, and then we drop down to that MSY value.

We can see that it results in a large reduction in removals and discards, for both in terms of landings, or in terms of weight, which is in that center column, that left column of that figure, and then in terms of number of fish is shown on the right, and we can see that there's -- The spawning stock doesn't increase very quickly, and so it -- Yes, and we'll just leave it at that.

This is the table for the OFL values, and so this assumes that you have a reduction in both the landings and the reduction in dead discards, starting in 2027, when management is put in place, and so, moving on to the ABC scenario, we can once again see that we have those high interim Fs in the first three years, and then we drop to a P* of 20 percent, and this has both a reduction in your removals and in your discards.

Moving on to the table, which you'll use to copy values, this also results in a reduction in your discards and your landings, and so the percent reduction in discards from the 2023 values is a -- I want to say a 93 percent, but let me look at this. It's a 94.2 percent reduction from the values in 2023, and so that's the results of the projections for those interim Fs. I could continue and present the other ones, but I think we've already discussed that this was the one that we're going to use, and so I'll open it up for questions.

DR. REICHERT: Thanks, Matt, for that work. I appreciate your work on that, and also to run the other, the Scenarios 3 and 4 for us, just in case people want to see that as a comparison. Any clarifying questions for Matt? Anyone? Any hands up, Judd?

DR. CURTIS: We've got Jeff Buckel. Go ahead, Jeff.

DR. BUCKEL: Matt, thanks for the updated projections, and I think you said this, but I just wanted to confirm that the discards, here in 2027 and 2028, that's assuming -- Those levels are assuming that you're applying the same, the reduction in fishing mortality to the landings, that we're not going to have increased discarding, that the discards will go down proportionally to the landings?

DR. VINCENT: Yes, and it applies the same F to the discards and landings.

DR. BUCKEL: Thank you.

DR. REICHERT: Anyone else? Any hands up, Judd?

DR. CURTIS: Not seeing any other hands.

DR. REICHERT: Okay. Thanks, Matt, for that. I hope you can stick around a little bit, in case any questions may pop up. Before we go into our action items, is there any public comment, Judd?

DR. CURTIS: Any members from the public that wish to provide public comment, please raise your hands. I've got Cameron Sebastian. Cameron, you're unmuted. Go ahead. Cameron, hit the microphone icon on the panel. You're green now, and we should be able to hear you, and,

DR. REICHERT: Cameron, if you could briefly introduce yourself, that would be good. If you're speaking, Cameron, we cannot hear you. Judd, do we potentially have some technical issues?

DR. CURTIS: Yes, and we may. Cameron, we can't hear you, if you want to -- I'm not sure if your audio settings are using a -- I'm not sure if you can hear us, but we cannot hear you currently. Can you try -- You might need to log out, and re-log back in, and then we can call on you when you rejoin us on the webinar. That sometimes kicks the microphone into gear.

DR. REICHERT: While Cameron is doing that, were there any other hands raised?

DR. CURTIS: No, and just Cameron Sebastian. Let's go ahead and move on, and we'll get back to him when he gets back in.

DR. REICHERT: Okay. Sounds good. All right, and let's go to the action items. The first one -- If you can bring it up, Judd, that would be good.

DR. SCHMIDTKE: Judd, somehow I was made presenter, and so I need you to take that back.

DR. VINCENT: Sorry, and I sent it to the wrong person.

DR. REICHERT: I think Judd basically wanted you to do the rest of the note taking, Mike.

DR. VINCENT: No, and that's my fault.

DR. REICHERT: All right. The first one is did the projections presented address the request to the SSC's satisfaction? I said yes, and anyone disagree with that? We were provided with the requested projections, and then some.

Does the assessment provide reliable predictions for future conditions to support fishing level recommendations? Well, here is a note I made, is that the projections, and, Matt, you can please comment to that, but the projections assume stationarity, and there were some other assumptions that are common relative to, for instance, potential changes in management, that, unless you know exactly what the management is going to look like, it's difficult to include that in the projections, and, as usual, the projections are highly uncertain, and I'm opening the floor to other -- To anyone who wants to make a comment, or has a question, or would like to discuss this. Does anyone disagree with what I just mentioned? Jeff, go ahead.

DR. BUCKEL: Not on the non-stationarity, Marcel, but I'll just comment on the discards, right, and this is something we've talked about, is that a good portion, depending on the year of the discards, comes from state waters, and so, you know, the projections are assuming that the removals are going to, removals being catch and discards, are both going to go down, you know, when the F goes down, but that would --

You know, the prediction of that happening on the discards is probably not going to occur, given that, right, there's an area where discards occur that are in state waters. In that trend of -- I guess that there's uncertainty there, in that assumption that the discards are going to go down with landings, given not just the state versus federal waters, but other issues as well, like hooks staying in the water to catch other species, for example.

DR. REICHERT: Yes, and thanks, Jeff. Anne.

MS. MARKWITH: Jeff really said what I was going to say, but I guess I'll pile onto that, in terms of I think that the discards really are going to be the confounding factor in all of this, and it's very likely that the discards are not going to go down. They may actually go up, just between changes in this fishery, but also changes in state fisheries that may interact with those smaller fish, and so that was all.

DR. REICHERT: Thanks, Anne. Cameron, I saw you were back online. I would like to finish this first review assessment, so people don't lose their train of thoughts, and then we'll come back to you for public comment, if you don't mind. I have a question for Anne. Was this also related to the discard issue that we talked about during the assessment? I assume that that is something that is carried forward in the projections. I'm not sure Anne, or Matt, who is better suited to answer that question, the potential misspecification of the model.

MS. MARKWITH: I'm probably going to defer to Matt on that, but I can maybe provide comment after, if I had anything additional.

DR. REICHERT: Okay. Matt, can you possibly address that, and, Steve, I saw your hand up, and so I'll come back to you after.

DR. VINCENT: Sure, and so, in the projections, it assumes that it's using the discard selectivity, which says that it's mostly age-three, and some age-two, and so, if it is a lot of age-zeroes, as Anne

had brought up, from the state waters, this would not be reflected in those projections, or in the assessment in general.

DR. REICHERT: Okay, and so that issue that we discussed in the assessment is carried forward in the projections, obviously. Okay. Thanks. I appreciate that clarification.

DR. VINCENT: I would get rid of the "plus". Sorry, and I'm talking to Judd. I would get rid of the "plus", because it's not many more than age-four, because it's a very dome-shaped selectivity. That works.

DR. REICHERT: Okay. Steve.

DR. TURNER: I'll pass. Thank you.

DR. REICHERT: Okay. Anne, you said you may have a follow-up after Matt's clarification, or this was basically it?

MS. MARKWITH: No, and that's basically it. I do think then discards are definitely going to be a major source of concern, assuming F stays the same, because -- Definitely from changes in state-managed species, like flounder, et cetera, and you see movement to fisheries like sheepshead and black drum, where they interact more with those smaller fish, that we assume those age-zeros, and age-ones, that aren't in the assessment, but we're assuming they're interacting with, and so that definitely is a concern there.

DR. REICHERT: Okay. Thank you. Anyone else relative to the first action item, review assessment? Any comments? The reliable predictions, that's highly uncertain, and the future conditions -- As are future conditions. No other hands up? If that's the case, I'll let the SSC ponder this a little bit further. Anne, go ahead.

MS. MARKWITH: That might be a legacy hand. I don't think I meant to click that. Sorry.

DR. REICHERT: Okay. Well, I'll let the other SSC members ponder this a little bit. Cameron, you're back online, fortunately. Go ahead with your public comment.

DR. COLLIER: We're still not hearing you, Cameron.

DR. REICHERT: Okay. Do we continue to have some technical issues, Chip or Judd?

DR. COLLIER: Yes, and we're still having some issues.

DR. REICHERT: Okay. Well, while you're trying to solve that, let's move to the next point, and that's identify, summarize, and discuss assessment uncertainties. I assume, Judd, that that should be projection uncertainties, because we already talked about the assessment extensively in our April meeting.

DR. CURTIS: Yes, and that's correct.

DR. REICHERT: Yes, and we already discussed the discards. We discussed the assumption of stationarity. Are there any other issues that we need to add here? What's the pleasure of the group? Anyone? Any other -- Carolyn, go ahead.

DR. BELCHER: Can I just ask for you all to provide a little bit more clarification to the question before, because the question is does it provide reliable predictions? You just comment on what the projections are telling you, but are they reliable enough for us to do fishing level recommendations? That really is kind of the core of what the council needs to hear.

DR. REICHERT: Any SSC members want to comment on that? I would really like not to be the only one, or one of the few, that provides comments relative to that. Anyone? Steve. Thank you.

DR. TURNER: The assessment indicated that the stock was depleted, and the projections provide information that's compatible with that.

DR. REICHERT: Thank you, and so I want to go back to what we said earlier. I'm not sure -- Jim, go ahead.

MR. GARTLAND: I agree with what Steve said, and, just to get rid of any ambiguity, I think maybe we could start the first bullet with yes. However, please note the caveats below, or something like that. You know, that way, we're answering the question. I mean, when it says, does the assessment provide reliable predictions, that's a yes or no question, and so I think we say yes, and then keep in mind these points below that we brought up.

DR. REICHERT: Well, Judd, it was more like the first -- Okay. Sorry. You're right. I was looking at the wrong -- I also would like to add there that the projections assume stationarity. I think that's an important point. We extensively discussed that at the April meeting, and that's why I highlighted the areas in our report, because there were some different opinions relative to the stationarity and what is causing the low population in the black sea bass population, the low biomass in the black sea bass population.

We were very specific in our report that, you know, it's likely -- That the SSC felt it was likely a combination of fishing pressure and other factors, including environmental, but that the extent of each is unknown, and that uncertainty, obviously, is carried forward in the projections, and so that, to me, that is a very, very large source of uncertainty. Something --

DR. CURTIS: I think just a clarification, Matt, and so the projections from the base model assumes that the recruitment is based on the stock -- The Beverton-Holt stock-recruit curve, but you also looked at the deviance from the last -- Was it ten years or something, the time series?

DR. VINCENT: Yes, and it includes a recent low penalty, essentially, or mean value, and so, if you want the years, it's 2014 to 2023.

DR. CURTIS: Thank you.

DR. VINCENT: Or 2021. Sorry.

DR. REICHERT: Kai, I saw your hand up. Go ahead.

DR. LORENZEN: I think there's a little bit of confusion here, because what it -- The model that we're using is based on the assumption of stationarity in the assessment, over the assessment period, right, and that's different perhaps from -- You know, the stationarity is not an assumption, or, well, I guess it enters into the projection, but the main point here is that the whole model, and the estimation of the Beverton-Holt stock-recruitment relationship, is based on the assumption that, in the past, the stock-recruitment relationship has been stationary.

DR. REICHERT: So is the text that Judd added -- Is it a better reflection of -- I want to make sure that we are very careful to --

DR. LORENZEN: I guess, yes. I think my point was that it's really -- It's the crux of the assumption is the stationarity in the assessment period, and that's really what underpins the use of the Beverton-Holt stock-recruitment relationship, and the estimated steepness, which I still disagree with, but that is a major caveat. I think it does -- I think it does the job.

DR. REICHERT: Well, I mean, as I said, we need to be careful, in terms of our reporting, that we are very -- That we are very careful, and very thorough, in how we express this, and so I want to make sure that the current text reflects what you were just saying. Also, you know, as I said, there seemed to be -- There were some different opinions, based on our conversations last time, and so, you know, again, if you disagree with some of the decisions we were making, I mean, I think it's important that that's documented, and, you know, that there's always an opportunity for people to provide a minority report, which, you know, sometimes it's important to indicate that there is disagreement within the committee.

DR. LORENZEN: But, yes, I think, you know, the way it's written right now, it sort of expresses those caveats.

DR. REICHERT: Okay. Carolyn, I didn't want to put you on the spot, but, you know, I think, obviously, the SSC is kind of struggling with all of this, and so I want to make sure that we -- That there isn't something else that the council may need from us, or clarification, and so, before I go to you, Steve, I saw your hand up.

DR. TURNER: Yes, I think the second bullet should -- Maybe the second and third bullets should come to the top. They should come ahead of the bullet that starts “projections assume”.

DR. REICHERT: Okay. Yes. Thank you. Carolyn, again, I hate to put you on the spot, but I'm not sure if you -- Can you hear me?

DR. COLLIER: Carolyn, you might have an extra mute on. It shows you're unmuted.

DR. BELCHER: Sorry. Too many levels of making sure that I'm covered. I have a mute on top of my mute, and so -- I think the difficulty is having the conversation -- Because I don't know that any of us really know the best way to ask the questions. You know, you think back to the example of red snapper, and red snapper were in a very different position, because that stock has rebounded from a low, by releasing fishing pressure.

Black sea bass has been continuing on a downward trajectory. We're at a point where we've had conversations, over two years, with recognizing that we don't think it's fishing 100 percent of the way. I went back, and was looking through minutes from the SSC, and, you know, again, comments about -- Back in October, or May, there was an express concern about the high F values, that they seemed extremely high, and were unrealistic, but we're moving forward. We had the conversations back in October too, when we were talking about the issues in general with, you know, what's going on with the projections, and are they really useful for management at this point.

We've updated data, and we've done all of these things, and I guess the question is still, fundamentally, what do we do? It's not overfished, or overfishing, and we're seeing other things going on, and so, as fishery managers, how do we deal for things that are not just fishery-driven? It's not one species in a vacuum. It's a species mixed in with fifty-four other species.

We're always going to end up with a choke point from one species to another, and I don't know that I have the answers either, but, you know, again, what do we do? If you guys have concerns in how the model is operating, the concerns about recruitment, how we're addressing recruitment, and all of these things just lend to less and less confidence in what's going on in the model.

We understand you blessed it with BSIA, but is it useful for management? Right now, with the fact that we've been chewing on this for multiple meetings, and haven't gotten any closer, it makes me wonder, and is it really useful for management, and so that's the big question, I think, that the council has, is how do we use this in a management set, knowing that there's a lot of other things working against us and it's not just the fishing pressure?

DR. REICHERT: Thank you, Carolyn, but, yet, the only way we can address this is addressing human behavior, fishing, currently, under the current management regime. Anyone in the SSC that would like to comment to what Carolyn just said? I would love to hear from the committee.

I know -- I fully realized that we very likely don't have a solution to this conundrum, but I see Fred, Jeff, and then Kai, and then Carolyn. Fred, go ahead, Fred Scharf.

DR. SCHARF: Yes and so, you know, I appreciate all of those comments, and certainly the SSC recognized uncertainty in the projections during our meeting just last month, but I think what we had very clear consensus on is that this stock demonstrates traits that indicate depletion, with almost complete certainty, in that -- You know, even if we ignore, or try to minimize, the most recent years, where the F is really high, you know, we still had almost twenty years of data that suggests that the F is more than twice as high as the predicted F at MSY, and the biomass estimate is less than 15 percent of the biomass that would generate FMSY, or biomass that would generate MSY.

We also have a recruitment -- You know, we have recruitment predictions, or estimates from the model, that are the lowest in the time series, and have been declining for almost fifteen years, and then we have a really robust fishery-independent index, and the estimates of abundance for black sea bass from that index are the lowest in the time series.

Despite the caveats, in terms of our ability to predict the future, what we have right now is a depleted stock, whether it's, you know, a combination of fishing and environmental factors that have affected productivity, but the bottom line is the stock is still depleted, and, you know, we

don’t -- All that we can do is provide advice to say we need to lower the -- We need to reduce F, and, really, we need to reduce the discards, and it really probably is going to come down to reducing effort in the fishery, but that's where the rubber meets the road, and so I think that we need to be very strong in our statements about the condition of the stock, regardless of uncertainties about future projections. The condition of the stock is the worst it's ever been.

DR. REICHERT: Thanks, Fred, and, yes, obviously, I completely agree. The only question I have, and then I’ll go to Jeff and Kai is, you know, even if we significantly reduce effort, because that's -- As I said earlier, that's the only thing that council can do, in terms of management, or one of the few things that the council can do in management, and is that going to get the stock out of a depleted state, and I don't know what the answer is, but I'm pessimistic, and, with that, I go to Jeff. Jeff, go ahead.

DR. BUCKEL: Fred covered the points I wanted to make. I'll just add that I think in these situations, right, even though it may -- You know, this low -- This long-term period of low recruitment got us here, but the only way to get out is, you know, a decent average, or an increase, in recruitment, and the only way to do that is to have some spawners.

That's our -- You know, what we have to do, at this point, is protect the spawners that are out there, which requires this reduction in fishing effort, in hopes that the conditions are right to get some good year classes, and so that's the -- You know, what has worked in the past, in some of these cases, where you protect what spawners are out there, and then, when conditions are right, at least you have the spawners there to get some good recruitment, but it's not -- There's no guarantees, but that's where we are, and, you know, we provided -- You know, I was the chair, and we provided ABCs from an assessment, and I think it's been two years ago now, to the council.

You know, there were requests for other projections, and then we ended up, you know, getting to where that assessment was outdated, but, at that time, we were at, you know, really low depleted levels, and, you know, that -- It's been frustrating for me to see that, in two years, nothing has been done, in terms of, you know, reduction in bag limits, just to try to protect these spawners that are out there, and so just add that, but, you know, these high bag limits that have continued for the last two years, with knowing that we were in a depleted situation.

DR. REICHERT: Thanks, Jeff, and I think that the SSC has been on record, and I think I presented a presentation to the council saying -- We were urging the council to, you know, protect the spawners that are still out there, and we mentioned before, you know, the indication of depletion, et cetera, and so, Kai, go ahead, and then I have Carolyn.

DR. LORENZEN: Okay. Actually, I'm not sure. I agree with everything that has been said beforehand, and, you know, obviously, the fact that we have a very depleted stock at our hands. I was thinking, originally -- I mean, given the big caveats we have about future recruitment, but also the fact that, you know, the assumptions that are in the projections about the changes in discard mortality that would come with -- That we could achieve are sort of unrealistic, which makes me think that maybe the answer to this very specific question is not yes, but, you know, if you look at the caveats, and you say is the answer still yes, and I think maybe we have to discuss whether we really feel the answer is yes, given the caveats that we have listed.

DR. REICHERT: Yes, and I don't fully disagree with you, especially if you look at the region. I would say, off of Florida, there is enough -- I think -- Well, correct me if I'm wrong, but there is sufficient information that stock is close to depleted there. Maybe that's not necessarily the case off of other areas, for instance North Carolina, and, if the answer is no, then my question to the committee is, so what do we do? What is our recommendation to council? That goes back to the question I posed to the SSC on a number of occasions in April saying, okay, what is our recommendation to the council? We cannot kick this can down the road much further, and so I want all of you to think about that, and, Carolyn, go ahead.

DR. BELCHER: You know, I don't have answers, any more than everybody else does. We all look at the data that's in front of us and do the best we can do with it, right, but I think the bigger thing is, going back through, and, again, you guys have hit some really good points in the past. Is this a shallow-water species issue, okay, and this is one that we've talked about. We've wrestled with regime shifts, and what does it mean to have a regime shift.

We recognize that it may not be, quote, unquote, overfished, or overfishing, in the textbook definition under MSA, but we recognize it's a depleted stock, but we also have red porgy, that has been struggling with the same thing, and yet we're going to probably revisit that, but that one has been struggling a hell of a lot longer than black sea bass has been, and yet we haven't had those fundamental conversations relative to red porgy.

So, you know, again, I think back to this is going to end up needing to be holistic, and, every time that we keep trying to pigeon it on one species, the council keeps putting all of these additional squeezes and pressure points on this fishery. It is a much bigger fishery than one specie, and so how do we help with the situation that's going on with red snapper if we're now concerned about the pressures that are hitting black sea bass? It's a mixed stock. There's multiple things out there. How do we fundamentally give fishing advice to manage this fishery?

Black sea bass is part of the issue. It's just one canary in the coal mine. How do we manage this fishery? We need help from you guys to help us figure out what do we do in the situations where the science is causing us more heartburn, upset stomachs, whatever you want to throw in on it, and I just feel like you guys have identified a lot of things that are adding to the believability of moving forward with where we are. I mean, I guess that's part of it, is, fundamentally, we're recognizing the issues, but how do we address the holistic problem, which is going to be a multispecies fishery, if we keep focusing on single stocks?

DR. REICHERT: Thanks, Carolyn. Yes, and I agree, but, you know, to play the devil's advocate, of course, a lot of this is how this is approached at the management level, and, you know, I've been struggling with this, and not just for black sea bass, but for other species too, that, yes, as an SSC, we realize the implications, but, in terms of science, this is where we are, and this is what we have, and I think, in the past, you know, it has been noted that what's needed is effort reduction.

Again, I'm really -- I'm struggling, and I'm not sure how to answer this question, and, you know, whether or not we agree, as an SSC, that the projections are reliable, and useful for management, you know, whether we say yes or no, there's still questions on how you're going to implement that.

If we say no, again, you know, as an SSC -- I would like to hear, from other members, what do we do? What is our recommendation to the council, beyond listing all the various uncertainties in the

model and the projections? Is there anything that the SSC can provide to the council to think about this, or address this, and, if there isn't, if we cannot come up with anything, then I think we should say that in our report, that this is the reality we are facing, and we basically have no suggestions, or recommendations, for the council. I hope that that's not the case, but so, while I let everyone think about that, I think Cameron is back online. Have we solved Cameron's technical issues?

DR. COLLIER: I hope so.

DR. REICHERT: Okay. Cameron, why don't you give it another try?

DR. COLLIER: Cameron, we're still not hearing you.

DR. SCHMIDTKE: Cameron, I'm going to give you a call, and I'll put you on speaker, and you can talk over the microphone through my computer.

DR. REICHERT: Thanks, Mike. I appreciate that. I guess it's reminiscent of the conversation we are having. Trish.

MS. MURPHEY: Hi, guys. Just to kind of follow along --

DR. REICHERT: Trish, can you briefly introduce yourself, for the record?

MS. MURPHEY: I'm sorry. Hi. I'm Trish Murphey, the chair of the council, from North Carolina DMF.

DR. REICHERT: Thank you.

MS. MURPHEY: So, just to kind of, you know, add along with Carolyn, and actually what Kai said, sitting here trying to think as a manager, I think my fear, from listening to you guys throughout the whole process, reading over the review and everything, I'm very hesitant of what would be the right thing to do, just because, just in that you guys are -- You all aren’t even on the same page, and so, you know, everybody is struggling with this, like Carolyn said.

You know, I'm kind of with Kai, and, granted, I'm not an assessment scientist or anything, but I'm not sure that -- I guess the point is I'm afraid that, if we did a lot more cranking down on our fishermen, it's not going to do any good. I really think -- That's what I'm afraid of. I'm afraid of, yes, that's the only thing we can control, but I'm afraid that, even if we do control that, it's going to keep going down. I mean, I really think that high F is coming from some unknown mortality, that we just hadn't put a finger on.

This kind of makes me think of weakfish fish, I mean, that same deal, and it was not fishing. It was some other kind of mortality. I know you guys rejected that it's a regime change, but I just can't help think that it is. I mean, there's -- From my understanding, even up north, the Mid-Atlantic is losing the southern end of black sea bass. In the South Atlantic, they're not in Florida anymore.

I'm just afraid that these projections aren't going to be helpful, because we don't know. I mean, you guys are concerned about the discards, and, you know, the commercial logbooks are reporting

zeroes. The non-stationarity thing sounds like it's a real big deal, and then, also, you know, this does not even include the inland state waters that Anne has been talking about as well, and it just seems so -- I mean, I guess I just question, and I'm hoping you guys can help with this, or feel my pain in going through this, in that I'm just afraid whatever we do is not going to do a damn bit of good, and so that's my concern, and I don't know if you guys can help with that.

DR. REICHERT: Thanks for that, Trish. I'm struggling with that, because this bleeds over into, you know, the management realm, which is, unfortunately, a consequence of, you know, the status the stock is in, and the results of the stock assessment, but I -- You know, I fully understand, you know, the council's conundrum there. Again, while SSC members are thinking about that, Cameron is on Mike's phone, and so, Cameron, let's give it another try. You're on, and maybe you can briefly introduce yourself and then provide your public comment.

MR. SEBASTIAN: My name is Cameron Sebastian. Can you hear me clearly now?

DR. REICHERT: Yes, we can hear you.

MR. SEBASTIAN: Hi, my name's Cameron Sebastian. I 'm operations manager with Little River Fishing Fleet and the Hurricane Fleet. We operate out of Calabash, North Carolina and Little River, South Carolina.

You know, black sea bass is an extremely, extremely important fishery to us, and, as I sit here and listen to the blueline tiles, and listened into the black sea bass, and, you know, everything looks exceedingly, exceedingly dark and gloomy, as I listen, but I also hear the tones of a lot of uncertainty, and a lot of risk, and a lot of projections, maybe right and maybe wrong, and then when we start -- When I start hearing about, you know, what I would assume would be species being stationary, and that stationary position being focused into the models, I mean, all I can say is what I've seen on the water for the last, whatever, thirty years, and we probably run the busiest fishing fleet in the -- I don't know, and maybe the east coast, and definitely in the Carolinas.

I've asked my guys, when I started to see this, in the last five or ten years, have you seen dramatic reductions of your shorts, of your throwbacks, and of your keepers, and pretty much the response, from the guys who are out there seven days a week, is we're not seeing any difference in what we've caught in the past, which brings me to the question of, I mean, if these fish are moving into the Carolinas, and away from other areas, does it now become time for a regional thing? Is it the Carolinas has a strong population, and the Georgia and Florida populations are waning, and not due to fishing, but due to circumstances beyond our -- You know, beyond our control.

The thing is, I mean, whatever comes down from this assessment -- I don't want it to be Russian roulette with what we do, you know. If sea bass gets chopped off, and cut down, it could be a very, very slippery slope for the continuation of headboats in the Carolinas, and then, once they're gone, they will never come back, and so everybody who is low to middle income is going to be out of the deal. It will only be guys who are in their own vessels and stuff.

So, you know, the thing is, it just has to be -- I don't know the answer to the question. I'm not a scientist. You guys can talk all you want, and I don't understand a lot of it. All I know is, on a daily basis, my guys are catching shorts, and they're catching the throwbacks. The survival rate is high on them. They're still catching some keepers.

As a company, and as somebody who allows the public to go out and fish at an affordable rate, you know, the one thing we would be devastating is to have things totally shut down. I don't care if it's one fish. I don't care if it's one fish that's twenty inches, as long as they can at least go out and try, and it will keep people fishing, and it will keep companies in business, because the companies are going to be extinct, and the fish will still be there. That's all I've got.

DR. REICHERT: Thank you, Cameron. I appreciate that. So Fred, I saw your hand up. Go ahead. Fred, if you're talking, we cannot hear you.

DR. SERCHUK: Okay. Can you hear me now?

DR. REICHERT: Yes, loud and clear, Fred.

DR. SERCHUK: Okay. Yes, and this -- Anytime you have a situation where you have a biological information that suggests things like absence of recruitment, and we have that information, based on surveys that are being done, a reduction in spawners to their lowest level that is seen in the series in which they've been surveyed, the possibility of a regime shift, and those are all bad news signals, and it means that the status quo is not going to be sufficient to rectify that.

That is, you know, if it's raining cats and dogs, and you're going to have it for a while, you need to do something to minimize the destruction that might take place, and I realize this is very difficult in a multi-species fishery, because it not only affects the species that is problematic, because it's not reproducing, and it's not growing, and it's not maturing, but we can't ignore it either, and, sure, the solution is going to be vexing, because it's going to have -- The one influence that fisheries has at its disposal is to try to minimize the impacts, so that some of the indicators here can be turned around.

Whether it's a regime shift, which means that we're never going to get recruitment that we've had in the past, or whether the growth of the stock itself is slowing down, so we'll never have the spawners that we had, I don't think you can throw up your hands. You know, at least from an assessment point of view, I think the assessment is giving us a very strong signal, and, you know, if the fish are moving out of the area, you're still going to have some problems, because whatever is left is still going to be susceptible of being caught, and so I don't have the answer, but you can't ignore the signposts, and that's all I think that the assessment was trying to do.

The signposts are saying danger, a lot of danger, you're approaching a cliff, and something needs to be done, to the extent that we can do something about it, to minimize the impact of humans, and I'll leave it at that. Thank you.

DR. REICHERT: Thanks, Fred. Well, a couple of things, and that also goes back to what Trish said. Trish, if I remember -- If I quote you incorrectly, let me know. You said, well, we rejected the regime shift. Fred mentioned evidence of a regime shift. You know, that's a conversation we had previously. If you look at that, and I forgot the paper, but, if you look at that, the scoring, there may not necessarily be a, quote, unquote, regime shift, and that's why I think we called it stationarity, you know, or something is changing in the ecosystem, but then, I understand, Fred, but I'm still struggling with what -- Okay, and what is the SSC, as an SSC, recommending here to the council?

We have a yes or no, in terms of if the projections are sufficient for management. We still need to answer that question. Carolyn and Trish had some other questions, and, of course, I, and the SSC, again, understand the conundrum, in terms of the implications of our recommendations, but, again, you know, to play the devil's advocate, you know, some of that goes into the realm of management implications, and so what do we do? What's the pleasure of the group, in terms of our recommendation to the council? I've said it many times today, and I said it over and over in April. Chris. Chris, we cannot hear you.

DR. DUMAS: Can you hear me now?

DR. REICHERT: Yes, and now we can hear you. Thanks.

DR. DUMAS: Great. Thanks. What I'm hearing -- At our April meeting, we had a presentation, and the conclusions were the stock is very overfished and undergoing extreme overfishing. The addition of more years of data, and the continued decline of the stock, allowed for estimation of steepness. FMSY, estimated by the model, corresponds to an SPR F of 61 percent. Immediate and drastic action must be taken to stop the overfishing and prevent the continued decline of the stock. Projections suggest that stopping all landings, and continuing with current discards, would not allow for rebuilding of the population.

The end of that presentation was, you know, very alarming, and pessimistic. The SSC asked for some additional runs, projection runs, to be done, and those were presented today, and, if I understood correctly, those additional projections did not -- Those additional projections did not change those conclusions at the end of the presentation that we heard in our April meeting, and so, you know, in that case, we, the SSC, at the end of our April meeting, we had some recommendations. We recommended, in our April report, using F current for F 2021 to 2023, for interim years of 2024 to 2026 and FMSY -- Anyway, we had some recommendations there.

Recommending a stock risk rating of high, a biomass rating of low, set ABC at the level of FMSY, buffered by uncertainty with a P* at 20 percent, contingent upon the council's stock risk rating of high, and so, since these additional projections, if I'm understanding correctly, did not change essentially the results from our April meeting, I think we should just go with the SSC recommendations that we have in our April report. Thanks.

DR. REICHERT: Thanks, Chris. Anne.

MS. MARKWITH: So I'm struggling, like everybody else, because there's no -- There's not an easy answer, and it's not going to make anybody happy. If we -- I guess I have a process question, on top of this, but, if we choose to do nothing, and like we don't think these provide reliable predictions, does that then put us back to the current ACL, which would be much higher than what's being predicted by these, and, if that's the case, I think knowing the trends in the index, and just the other issues that are going on with the species, whether you look at it in a vacuum or holistically, I don't think we're doing our due diligence if we don't recommend -- I mean, the projections aren't changing, and we're not rebuilding the stock right now as-is.

DR. REICHERT: Yes.

MS. MARKWITH: So I think, if we stay at the current ACL, we're not doing the due diligence to the resource.

DR. REICHERT: Well, I want to make sure, for the record, that we are recommending an ABC, and so it's not the --

MS. MARKWITH: ABC. Sorry, and it's --

DR. REICHERT: You are right that, if we decide that we cannot provide an ABC, that the current ABC will remain in place until -- Well, until the council -- The council can only lower the ABC, but it theoretically stays in -- Because then they basically decide an ACL that's considerably lower than the ABC, but that current ABC will stay in place until the SSC recommends a different ABC, higher or lower. Does that answer your question that you had earlier, in terms of procedure?

MS. MARKWITH: Yes, it does, and I guess that's -- I guess it makes me feel better knowing the council can recommend something much lower. I just -- I have concerns not recommending something, because I do think there's an issue with the stock, but it's hard to -- It's a hard one.

DR. REICHERT: Yes, and I agree, because I think it would be -- Again, I would like to hear from other people, but I think it would be scientifically very difficult to justify not to provide an ABC, but I may be wrong. Mike, I see your hand up, please, and I would love for you to provide a solution to all problems we've been discussing today.

DR. SCHMIDTKE: I don't know about a solution, but I do want to hit on -- You know, just, I guess, part of the procedure aspect, and you were correct, Marcel, in the sense that, if the SSC does not put forward an ABC, then the current ABC remains in place. The council does have discretion to lower the annual catch limit.

I do want to also point out that the council has already initiated an amendment to respond to this stock assessment, and that amendment includes several measures within it that would reduce catch, in one form or another, changing bag limits, changing size limits, various other measures, and so that has kind of been waiting on catch levels to come along with it, but the council is able to advance that, if they choose to, with catch levels, reducing them under the current ABC, or without addressing catch levels, and just addressing like the catch, the actual like on the water fish catching measures, but that is something that has been initiated, and it's gone through the scoping phase at this point, and so work is underway to build that, but it has been kind of brought to a point of waiting on are we going to have an ABC change included in this, or is this going to include only other measures, and where's the council going to go with this.

That may be something that, if you all are not fully set on a specific ABC level to recommend, that your recommendation would include advancing that, to reduce the fishing mortality in ways that the council has the purview to do, even under the current ABC, and so just food for thought, that there is an amendment that is underway, and that is a vehicle that the council can make some management changes through.

DR. REICHERT: Thanks, Mike. We heard from some members, in terms of our recommendations in -- John, I saw your hand up. Go ahead. If you're talking, we cannot hear you.

MR. CARMICHAEL: Am I here?

DR. REICHERT: Yes, and we can hear you now. Hi, John.

MR. CARMICHAEL: Okay. Thanks, Marcel. I appreciate it. You know, and I think it's pretty clear the status of the stock. I don't think there's any dispute to the summary that, you know -- I think, you know, Fred Scharf, you put out there early on that the survey shows that what we're seeing in the fishery shows that, and there's certainly been no argument from the fishermen across a large portion, that, you know, the stock is not what it used to be. There's certainly clear loss of the fishery in central to southern Florida. You know, we've heard that from everybody.

We don't know how important the fish down there were to the overall stock. We don't know how the fish are responding to changing water temperatures. We don't think that they're moving north, and filling in the southern end, that the Mid-Atlantic stock has abandoned, it seems, and you know, maybe they're doing something different, and so there's a lot of questions.

I think though, you know, one of the challenges we're really going to have to face at the council meeting with this is kind of a shift in the causes. In the last assessment, you know, the results showed that the stock hadn't even been overfishing until maybe the last few years, using the reference points that were recommended, and, you know, this is a stock that's been through overfishing, overfished, and rebuilding, in various assessment iterations over time.

Then, you know, really, the only thing that changed here is the reference point, the metric that we use to measure the stock. The Fs are actually lower, in this update, than they were in SEDAR 76, over the last ten years or so, and so, you know, I think it's just sort of hard to rectify that with saying, well, suddenly now it's fishing, it's fishing, it's fishing.

Fishing, I'm not going to say fishing doesn't have an impact. It has a huge impact, but, you know, last time we were looking at this, we were pointing out that the biomass started to decline well before, you know, there was any sort of overfishing going on, or any evidence of overfishing, or anything that showed that there should have been issues, and so we know something is going on with this population, and how do we deal with that, and how do we get to recovery, and, you know, I think you heard from Trish, and Carolyn, and others about, you know, we potentially have a lot of pain, and there's no doubt there is, and the stock may not get better.

You know, red porgy is another case in point, and so, yes, it's very frustrating for everyone, but, you know, one of the things that really stands out for me is just how are the discards staying so high if there's such recruitment failure going on? The discard trends don't align with what's going on in the survey, and I think that's a question. I think the discards are something like 90 percent of the removals, and I think there's an issue there.

The discards are unreported. I mean, they're unobserved, and they're unvalidated. They're pretty much unreliable from MRIP, I think, as we all know, and so it's really difficult to see how the discards have continued to rise as the population has declined, and the survey certainly validates that for the older fish. What's going on with these discards? How has this discard-driven fishery been able to encounter an increasing proportion of the population? That would imply that somehow effort is becoming more effective, or the fish are shifting into an area where the effort is.

Is there a lot more inshore effort that's encountering this fish? We don't have evidence of that within MRIP, but we know how coarse that measurement tool is, but it really is a challenge to understand what's going on, when we have this decline in the population, and then we have these discards continuing, and we have this -- If you just look at, you know, basically the encounters of the discarded fish, relative to the population, you just have that really going up over the time when the population itself was going on, and that's just really hard to understand.

The other point that I know we're going to have to hear about at the council meeting is just the huge spike in F that you see in the terminal year, and everyone recognizes that fishing mortality has an impact, but that F, that spikes up to above three in the terminal year, is just really hard to rectify.

It essentially implies that nearly 99 percent, 95 to 99 percent, of the age-five, four, five, six, seven, eight, nine, ten, and eleven got wiped out by fishing. That's just really hard to understand, when you look at the trend in F and the estimated Fs over a longer time period.

Now, I know that's a small thing, and it's not going to significantly change the outcome, but say, you know, factoring an F like that into the average that's used in the projections probably cuts what could be harvested by 50 percent, and that makes a big difference in terms of just getting support, which is so necessary for this, getting buy-in from the fishermen, which is so necessary to actually achieve any success, if they look at the things like that and just say that it's ridiculous.

So, you know, even if it were moderated, as was somewhat discussed at the prior meeting, there would still be a huge reduction in the overall harvest coming, and so, you know, some of those little details really add up, and matter, in the big picture that the council is going to have to deal with this when they have to face reality, and I'll just end with something that the new Assistant Administrator, Eugenio Pineiro, stated at the recent CCC meeting, saying that, you know, the councils are where fishery science meets reality.

I think what some of you guys are hearing is just that feeling from the council members and stuff who are on there, that we're going to have to deal with the actual reality of what's going on within the science, which has got its strong points and its weak points, and we just try to really balance that as best we can, and so I thank you. You know, this has been a tough, tough challenge, and I appreciate the opportunity to comment to you guys, and, you know, you're just really trying to do what you can to help the council in recognizing the problem that we all face.

DR. REICHERT: Thanks, John. Yes, and, you know, some of the things that you just mentioned were discussed in April and again today, and F was extensively discussed in the April meeting, and, you know, Erik, again, commented that, you know, that was the only way the model could explain the low population size, and, anyway, we discussed this at length.

The question still for the SSC is, what do we do, and so I want to go back to that, and realizing that, yes, this is a very, very difficult issue for the council, for the SSC and the council, but, again, some of the difficulties are related to, and again playing the devil's advocate, to the very tough management decisions that need to be made, but, as an SSC, obviously, you know, it's difficult to close our eyes for that, and, at the same time, we need to take all the uncertainties that, well, we discussed in April, and today, into account. I saw Steve raise his hand. Steve, go ahead.

DR. TURNER: Yes, and uncertainty isn't a reason to not act. I could respond to a lot of the things that have been said, but I won't. F has been over FMSY for more than twelve years. The index is way down. I think we go forward with the projections. There is always uncertainty in assessments, and, as decisions get harder, people poke more at uncertainty. You know, even if this is partially due to external factors, you still have to protect the spawning stock. I think we move forward with the information that we have, and the projections that we have. Thank you.

DR. REICHERT: Thank you, Steve. I really appreciate that. We have two proposals, or recommendations, one from Steve and one from Kai, that's saying, well, maybe we should not provide an ABC. Sorry if I'm -- I believe it was Kai. Correct me if I'm wrong.

The latest proposal is from Steve to accept -- With all the uncertainties in there, accept the current projections and base our ABC recommendation on those current projections. We have listed, in our current report, various uncertainties, that I will present to the council when I present this in June. This is currently -- So Judd, if you could clarify that in the first bullet, and I would say the SSC recommends the presented projections for the ABC, but had several concerns, and I would say significant concerns, and I would say including the ones below, and so this is currently on the books, and this is a consensus statement.

This means that the entire SSC agrees with this recommendation. If anyone disagrees, this is the time to speak up, and I'll let you guys ponder this a little bit, and read through it. Raise your hand if you have questions, clarifications, or disagree with this. Seeing no hands, and so this will become the SSC's consensus statement. Okay.

DR. CURTIS: Chris has his hand up.

DR. REICHERT: Okay. Chris, go ahead.

DR. DUMAS: So this says the SSC recommends using the projections for the ABC. Do we need to specify which projections? The ones in our April report or some of the modified projections, or the additional projections, that we heard presented today?

DR. REICHERT: Today, and, Judd, maybe you can make that very specific, and we can probably refer to a scenario.

DR. DUMAS: The projections without the F for 2024 that Mr. Carmichael spoke about a little while ago?

DR. REICHERT: No, and that was, I believe, the 2023. That was the high spike, and, in the April meeting, we discussed that if we -- There was some concern by the SSC that we increase the risk by not including the 2023 data point, and that was laid out in the minutes, in that page 172 and the following pages.

DR. CURTIS: I've populated the table with the projections scenarios that were agreed upon. These are the values you see before you here. The 2024 through the 2026 represents the interim years, with the F carried forward through those interim years, and projections would then start in 2027

and 2028, and you have it broken down from OFL, which was your FMSY estimates, and your ABC recommendations, which is that 20 percent P* value applied to the OFL.

DR. REICHERT: Okay. Thanks, Judd. Was that the completion of our -- Let me go through the -- Yes, and I think those were all our action items. I am really -- I mean, I've done this before, and I'm really going to ask the SSC to very carefully read through our report and comment, so all our discussions are correctly reflected in that, in our webinar report.

Okay. Before we move on, it is ten to five. We still have two agenda items to go through. Before we do that, Judd, I want to ask you -- Because, realistically, again, and I hate to do that, but, again, it doesn't look like we have sufficient time to go through the report, unless we do that right now, and potentially punt SEDAR and the terms of reference for gag grouper to a future meeting, but I also want to make sure that our report reflects our discussions, and that everyone is comfortable with that, and so I would like to hear from the group whether you are right now comfortable with the notes that you have read earlier, or should we go through those, and perhaps --

DR. CURTIS: Marcel, let me proffer a suggestion, because I need to still compile notes for the southern region blueline tilefish model, based on the text that was input for the northern region, where there were the similarities, as well as integrate any of the comments from the notes, the shared notes document, into this report document, and so going through it right now may not be the best use of time. We do need to cover the terms of reference for the gag, and it would be -- I'll ask Julie, if she's still here, if there is another opportunity to discuss the SEDAR process changes, or is that imminent? Do we need the SSC to hear it, or can that wait? Go ahead, Julie.

DR. NEER: Well, I don't know when your next meeting is. If it's not until, you know, October, then -- Well, we're supposed to discuss the SSC feedback at the steering committee meeting in August. However, if you're going to rush through it in ten minutes, I don't know that the feedback will be worthwhile anyways. John Carmichael, are you still online? Do you have thoughts?

MR. CARMICHAEL: I mean, I'm still here. We don't have a whole lot of time left. I don't want to feel like we get into this and then don’t get feedback.

DR. NEER: I don't want to rush it, and you do need to go over the gag TORs, because they are on the agenda for the June council meeting, and so I think SEDAR gets punted again, but I should be first on the agenda next time.

DR. REICHERT: We'll put you first on the agenda next time, Julie, and I hate to do that too, but I -- Jim, I saw your hand up. Go ahead.

MR. GARTLAND: That was just to the earlier point about what we should do. I mean, I think we've been wordsmithing all along, and kind of, you know, pouring over the words, and so I think we're fine to just keep going.

DR. REICHERT: Okay. Well, my concern is, for the last two meetings, Judd and I, and Wally have -- It just adds a lot of work for us to get the report right, and, you know, unfortunately, there's -- The last go-round, we had very few comments, and I don't think that was a reflection, necessarily, of the completeness of the report, and so that's why I'm a little hesitant to just leave it as-is, but I guess that's where we are right now.

I agree with you, and Judd and I will work on the report. Again, once again, we'll probably have a very, very short turnaround, because I need to present this at the June council meeting, which is in about two weeks, and so I'm really pleading to SSC members to provide comments, and do that as quickly as possible, or, as I requested last time, if you don't have any comments, please let me know, because it's not my report, or Judd's report, and it's our consensus report.

Having said that, let's then move -- Again, thanks, Julie, for your willingness to be flexible. I know it's been frustrating, because this is the second time we're punting the SEDAR changes, and one of the notes I made is that the role and the workload and the time commitment for the SSC is still very unclear, and so this really affects the workload of the SSC, and so we do need to discuss this, and I agree with you that I would rather have a good discussion about this than to rush it through, and so let's move to Agenda Item 7, to the terms of reference of gag grouper. Judd, go ahead.

SEDAR TERMS OF REFERENCE FOR GAG GROUPER

DR. CURTIS: Thank you, Chair, and so I'll pull up the terms of reference for gag grouper, the 2026 gag grouper stock assessment, here shortly. If you recall, this is kind of the second step in the process of recommending an assessment, and the framework of the assessment, and the details that the SSC would like to see.

You previously had reviewed the scope of work for gag grouper, which is more of an overview and broad document to start framing the terms of reference, and, once the SSC runs through these terms of reference, and adds their comments, those will be passed on to the council, that will review these at their June meeting, in just a couple of weeks, and so hopefully you've had a chance to look at these terms of reference. Let me pull over the document.

For the most part, they're pretty standard. I've incorporated some of the language taken from the scope of work that the SSC wanted to see, and then a couple of the kind of newer additions made to these terms of reference, that may be different from previous terms of references that you all have seen, are highlighted in yellow, and I'll kind of bring those up as we go through, but, just in the interest of time, I don't want to read each of them, but maybe we'll stop after each one, and, if there's any comments -- Let me bring that there.

The first term of reference, right, is just the standard kind of language about data providers and the data that will be incorporated into the assessment. The second term of reference looks to incorporate the latest BAM model configurations and the various assessment models that are being requested.

DR. REICHERT: Judd, what's the terminal year, the projected terminal year? Is that in -- I forgot, and is that anywhere in the terms of reference?

DR. CURTIS: That is not included in the terms of reference. That is -- We've kind of revised the language, so that we're not specifying the exact terminal year. You'll see, in that language in the first paragraph of the TOR 1, that the data providers should provide their data up to the most recently available data, and then, depending on the analyst's discretion, they may use any preliminary or partial data for more recent years.

DR. REICHERT: Okay. I know that's sometimes very confusing, what the terminal year is. Okay, but I understand why that's done. Thanks.

DR. CURTIS: Yes, and, I mean, if the SSC -- You know, if that's a concern, we can add that as a comment, to provide a terminal year to the terms of reference, for clarity, if that's what the SSC would like to see.

DR. REICHERT: I personally would like some clarity, but I understand why this is not done.

DR. CURTIS: Okay. All right. I made a note of that, Marcel. Thank you. Number 3 is considering any new and updated life history information. This is a spot where there was some input from the scope of work, and so the SSC had recommended looking at other mechanisms for natural mortality estimators, and then any other sensitivity analyses used to compare results.

Term of Reference Number 4 was updating these model parameter estimates and their variances, and here we've included some additional language on evaluating a range of MSY benchmark proxies. If a proxy is recommended, determine the best proxy that approximates MSY, and then provide the F, yield, discards, biomass, SSB, and recruitment that corresponds to the MSY, or chosen proxy, and that is -- As you all know, we've had a lot of discussions on proxies for MSY, and I just wanted to outline that and make that clear.

DR. REICHERT: Judd, I made a note that, in terms of the proxies, it would be good, given the discussions we had at yellowtail and mutton, if a proxy is used, a little bit of a justification why, and that goes back to, in some instances, the uncertainty around some of the estimates were considered too high, and a proxy was used, and, in other assessments, that same uncertainty was used as-is, and so it would be good to have a little bit of discussion, or a justification for, if a proxy is recommended, why.

DR. CURTIS: Okay. I made a note of that, Marcel.

DR. REICHERT: Thanks.

DR. CURTIS: Term of Reference Number 5 is to evaluate and document the following specific changes in the input data or deviations from a previous assessment model, and these are inputs that the SSC recommended during the development of the scope of work that have been integrated into the terms of reference.

5a is incorporate length composition from the SERFS video survey, as feasible. There may be an indication that there may not be enough sample size to incorporate, but “as feasible” I guess is the language there to use. Is the SSC still comfortable including this as a term of reference, 5a?

DR. REICHERT: I would be very comfortable, because, if nothing else, I think there's a South Carolina DNR study that looks at potential differences in selectivity and to see how the length -- Because in the past, length compositions of the video -- Or of the trap were borrowed for the video survey, and I think that -- So I think it would be good to incorporate whatever information that can be gleaned from the video survey, and so my recommendation is to leave it in the terms of reference.

DR. CURTIS: Okay.

DR. REICHERT: Then, if it's not feasible, it can always be removed, but that's my recommendation. Wally, go ahead.

DR. BUBLEY: I'm with Marcel on that. There's enough wiggle room there that it doesn't hurt to explore it, and, if nothing is going to come from it, then it's just removed, or not utilized.

DR. REICHERT: Thanks, Wally. Go ahead, Judd.

DR. CURTIS: Thanks, Wally. We'll leave that language intact, and 5b is considering new methods of estimated natural mortality. I think, since the last assessment, there have been some additional papers and things used within assessments, and so that's just reflecting the new literature that has been utilized for estimating natural mortality in recent stock assessments.

The recommendations from the South Atlantic Catch Level Projections Workgroup is there. We've included that in the past terms of reference for assessments. Those of you not familiar with that projections workgroup report, I encourage you to visit it there. It has formed the backbone for not only terms of reference in the assessment, but then also how we treat some of the catch level recommendations moving forward.

The scope of work requested a topical working group be convened, to include these various members, to meet prior to the assessment development, specifically focusing on reproductive dynamics, and a topical working group is recommended to better characterize reproductive dynamics of gag, including sex ratios, maturity schedules, batch fecundity, spawning seasonality, spawning frequency, and sperm limitation.

DR. REICHERT: Judd, my question there is, and that may be for Wally or others, but is there enough additional new information available to justify this technical working group, topical working group? Probably, because, otherwise it probably wouldn't have been suggested, but I was just wondering.

DR. CURTIS: This was a requested input from the scope of work. I don't recall who mentioned that, but there has been some additional work done in this field of reproductive dynamics, as related to some southeastern stocks. We saw a little bit of information presented at the recent South Atlantic red snapper data workshop that had a bearing on the reproductive dynamics selected for the stock assessment data inputs, and so I think that's why that was there. Wally, I see you have your hand up. Go ahead.

DR. BUBLEY: A similar kind of thing. I mean, there are some more data that might clear up some things, but, also, as Judd just mentioned, there's other research that's come out as well to have some discussions as to how to handle some of these factors, and so I think not necessarily the data, but more the findings of research is why something like this might be useful.

DR. REICHERT: Okay. Thanks, Wally. That's similar to the conversations that were had at the red snapper data workshop, and so okay. Thank you. I appreciate that.

DR. CURTIS: Okay, and this Term of Reference Number 7 would have made a lot more sense if we had gotten to see Julie's SEDAR presentation, but part of the process is to formulate and approve technical working groups that include various SSC members, industry representatives, and other outside technical experts to meet as needed to review model development and provide guidance on the data inputs, modeling parameters, et cetera, and so that is reflected here. This is a new term of reference that has been added, with the anticipation that the revisioning of the SEDAR process will take place of the new roles of SSC members and others in the technical workgroup process.

DR. REICHERT: Thanks, Judd.

DR. CURTIS: Term of Reference Number 8 is compute short-term and long-term population projections, as necessary. This was one that Dr. Erik Williams added to the terms of reference, and I think that we had been doing that, for the most part, but now it's explicitly stated in our terms of reference, and then, lastly, just developing a stock assessment report to address these TORs, and so any questions on some of the things? I know I went through them real fast.

DR. REICHERT: Any SSC members have any questions, comments, additions to that? Any hands up? No hands. Okay. Then the terms of reference for the South Atlantic gag are approved, with the comments that the SSC provided, and this will be discussed at the June meeting, I assume?

DR. CURTIS: Correct, and so I'll include your comments in this document, and this will be presented to the council at their June council meeting for final approval, and then it will be passed along to the Southeast Fisheries Science Center.

DR. REICHERT: Sounds good. All right. Any other business? Anyone? Judd?

DR. CURTIS: I do not have any other business for the committee at this time, Marcel, and if you had anything else, or anyone else.

DR. REICHERT: No, and any one of the liaisons have anything? Seeing no hands, any public comments at the end of our meeting? Any members of the public want to make a comment? Any hands?

DR. CURTIS: Not seeing any hands, Marcel.

DR. REICHERT: Okay, and so we had public comments earlier. All right. Well, again, under Number 10, once again, we did not have time to review the webinar report, but we need to provide a report as soon as possible. Judd, as I said, in two weeks, I need to provide a report to the council that includes the webinar, and so Judd and I will distribute the report to the SSC as soon as possible.

I'm probably going to have to request a very quick turnaround, and so I apologize in advance, and then we can provide that report as soon as possible for the council meetings, and so hopefully we'll send it out later this week, and then hopefully, by Monday or Tuesday, we'll have your comments back, and, again, I apologize for this short turnaround, but that's where we are right now.

Next meetings are listed here. I'm not going through them. We'll hopefully meet each other again in-person in October, and, unless anyone has anything else, I really thank everyone for your

contributions, and, Judd, for your work on getting all the notes in the report, and anyone have any last-minute comments? Fred, go ahead, Fred Scharf.

DR. SCHARF: Yes, and I just wanted to say thank you, Marcel, to you and Judd for all the work today. Appreciate it.

DR. REICHERT: Thank you, Fred. I appreciate that. All right. It is 5:10. Let's adjourn, and we'll see some of you at the next webinars, or meetings, and, if I have any questions relative to my presentation to the council, I'll let you guys know. Again, thanks, everyone. Have a good rest of the day.

(Whereupon, the meeting adjourned on May 28, 2025.)

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Transcribed By
Amanda Thomas
June 9, 2025

Attendee Report: Scientific & Statistical Committee Meeting (May 28, 2025)

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Allen	Shanae
Barile	Peter
Barrows	Katline
Belcher	Carolyn
Brouwer	Myra
Bubley	Walter
Buckel	Jeff
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